

SIDEKICK PC USER'S MANUAL

VERSION 2.02

TABLE OF CONTENTS

1. INTRODUCTION.....	3
1.1. ACRONYMS AND ABBREVIATIONS.....	4
1.2. SYSTEM REQUIREMENTS.....	5
1.3. AUTOMATIC SOFTWARE INSTALLATION.....	6
1.3.1. Overriding the default installation folder	7
1.3.2. Disabling Driver Signature Enforcement in Windows Vista 64-Bit Editions.....	8
1.3.3. Setup of the USB drivers for the Appliance Connection Kit	10
1.3.4. Uninstalling SidekickPC.....	11
1.4. SOFTWARE INITIALIZATION.....	12
1.4.1. License Activation.....	12
1.4.2. Internet Settings.....	14
1.4.3. Update Dialog.....	15
1.4.4. Software Auto Update	20
1.4.5. Database Update	21
2. HARDWARE CONNECTIONS.....	23
2.1. CONNECTING THE APPLIANCE TO THE PC	23
2.2. DISCONNECTING THE APPLIANCE FROM THE PC	26
2.3. CONNECTING THE SPARE BOARD TO THE PC.....	27
2.4. DISCONNECTING THE SPARE BOARD FROM THE PC.....	29
3. SOFTWARE OPERATION.....	30
3.1. SPARE BOARD INFORMATION FORM	33
3.2. STARTUP FORM	36
3.3. CONFIGURATION FORM.....	38
3.3.1. Configuration Form Menu Commands.....	43
3.3.2. Printing Extended Information in the label	47
3.4. IDENTIFICATION FORM.....	52
3.5. HISTORY FORM.....	54
3.6. MONITOR FORM	55
3.6.1. Troubleshooting Wizard.....	57
3.7. GRAPH FORM	60
3.8. DIGITAL I/O FORM	61
3.9. APPLIANCE INFORMATION	62
4. APPENDIX.....	66
4.1. MANUAL SOFTWARE INSTALLATION	66
4.1.1. SidekickPC Setup	66
4.1.2. SQL Server Management Studio Express Setup	78
4.2. TROUBLESHOOTING SETUP PROBLEMS	81
4.2.1. Manual installation of prerequisites	81
4.2.2. SQL Server installation problems.....	81

1. INTRODUCTION

Sidekick Enterprise Solution is a standard system designed by the **Global Technology Center** (GTC) department of Electrolux for the after sales support organization. The main target of this system is to provide field support engineers with a handy tool that, together with proper interface modules, simplifies the execution of diagnostic procedures and that allows an easy way to configure electronic boards.

Sidekick is an enterprise-wide system that integrates the most up-to-date information about Electrolux products into a client software tool. The client software (**SidekickPC**) lets you quickly diagnose appliances and create spare electronic boards. This is the User's Manual of this application.

Data integration between corporate databases and SidekickPC seamlessly occurs by means of web services that exploit the latest technologies in order to minimize update time and improve user experience and security.

There are many advantages in using a computer-aided service tool, for example:

1. the possibility to diagnose the appliances in less time and in a more precise way, thus reducing the amount of spare components required to fix the problem and the time of intervention. SidekickPC identifies if possible the appliance to test, gets and decodes the internal status of the electronic controller, and it executes the diagnostic procedures and troubleshooting steps you require;
2. the possibility to create spare electronic boards starting from “generic boards” with a programming and configuration procedure. This function ensures that you create the spare part in the same way as it was originally produced in the factory.

1.1. ACRONYMS AND ABBREVIATIONS

AMI	Appliance Mini Interface
ANC	Article Number Code
ACK	Appliance Connection Kit
BITS	Background Intelligent Transfer Service
BMP	Bitmap File
CCF	Cycle Configuration File
CTI	Cross Technology and Innovation
DNS	Domain Name System
ELC	Engineering Level Code
ESD	Electrostatic Discharge
GIF	Graphic Interchange Format
HTML	Hyper Text Markup Language
IP	Internet Protocol
JPG	Graphics file type developed by the Joint Photographic Experts Group
LBL	Label Definition File extension
MCF	Machine Configuration File
MDAC	Microsoft Data Access Components
MDI	Multiple Document Interface
MMC	Microsoft Management Console
PC	Personal Computer
PNC	Product Number Code
PNG	Portable Network Graphics
Prog	Progressive Insertion Number
SKC	Service Kit Code
SP1	Service Pack 1
SSE	Service Support Europe
TCP	Transmission Control Protocol
TDS	Technical Documentation System
TIFF	Tagged Image File Format
URL	Uniform Resource Locator
USB	Universal Serial Bus
WMI	Windows Management Instrumentation
WSE	Web Services Enhancements

1.2. SYSTEM REQUIREMENTS

Software prerequisites for **SidekickPC** are the following:

1. Microsoft Windows XP SP2, Vista (except the Starter Edition) and Windows 7. Both 32-bit and 64-bit versions of Windows XP, Windows Vista and Windows 7 are supported.
2. Microsoft Windows Installer 3.1
3. MDAC 2.8
4. Microsoft .NET Framework 2.0
5. Microsoft WSE 3.0
6. Microsoft Internet Explorer 6.0 SP1 or later
7. Microsoft SQL Server 2005 Express Edition SP2 or SQL Server 2008 Express Edition. If in your PC you have already installed another edition of SQL Server 2005/2008, this item is not required.

Microsoft Internet Explorer 6.0 SP1 is software prerequisite for all installations of SQL Server 2005, as it is required for Microsoft Management Console (MMC) and HTML Help. A minimal installation of Internet Explorer is sufficient, and Internet Explorer is not required to be the default browser.

The automatic installation procedure of SidekickPC, installs all software pre-requisites and the SidekickPC software using default settings in an unattended way.

The installation procedure automatically installs Microsoft SQL Server Express Edition 2005 SP2 only if it does not detect the presence of an SQL Server 2005 or SQL Server 2008 instance in the local computer.

The detection of the presence of SQL Server instances occurs by means of the Windows Management Instrumentation (WMI) technology. In case the software installation procedure detects the presence of more than one instance of SQL Server, the selected database instance will be the first Express Edition that WMI enumerates or, if no Express Edition is present, the first enumerated instance.

If you want to override the default installation parameters of SidekickPC, you must install it manually. Please refer to the appendix for further information on this matter.

If none of the software prerequisites is installed, the target PCs needs at least 15 GB of free hard disk space.

The minimum RAM quantity required is 512 MB (1 GB highly recommended) while the minimum processor speed required is 1 GHz. A CD or DVD drive, as appropriate, is required for installation from CD or DVD media.

SidekickPC requires at least a monitor resolution of 1024x768 pixels for best usability. However it is also possible to install it in PCs with a screen resolution of 1024x600 pixels. In this case, a vertical scroll bar allows you accessing the entire contents of the user interface forms.

1.3. AUTOMATIC SOFTWARE INSTALLATION

The automatic installation procedure consists in the **AutoInstall.cmd** command file. This is a sequence of batch commands that install all software pre-requisites and the SidekickPC software using default settings.

You must log on as full Administrator in order to make the installation of the software.

By default, the automatic software installation procedure installs SidekickPC in the **C:\Electrolux\SidekickPC** folder.

You can however override this default and setup the software in a different directory. Please refer to the next paragraph if you need to change the default installation directory.

The following recommendations apply:

1. **Windows XP:** simply double-click the **AutoInstall.cmd** file.
2. **Windows VISTA and Windows 7:** right-click the **AutoInstall.cmd** file and then select the "**Run as Administrator**" option. Depending on your actual configuration, the operating system may ask you for a further authorization. Please remember that, under Microsoft Vista, you must explicitly execute **AutoInstall.cmd** as administrator even if you are already logged in with an administrative account.

If you are using a 64-bit edition of Windows Vista or Windows 7, please refer to paragraph **1.3.2** that describes how you can disable Driver Signature Enforcement so that you can successfully install and use the USB drivers for the appliance interface module.

Please remember that this setup procedure does not install the programs that are already installed in your PC. In addition, the automatic setup procedure implements some workarounds to a few known setup problems of the SQL Server 2005 software. One of these workarounds consists in temporarily disabling network connectivity during the setup of this software. For this reason, please do not worry if you see a warning that refers to a "limited network connectivity" issue during the setup.

Another workaround consists in uninstalling and re-installing the SQL Server 2005 Client Tools.

After you start the execution of **AutoInstall.cmd**, you can see the welcome screen:

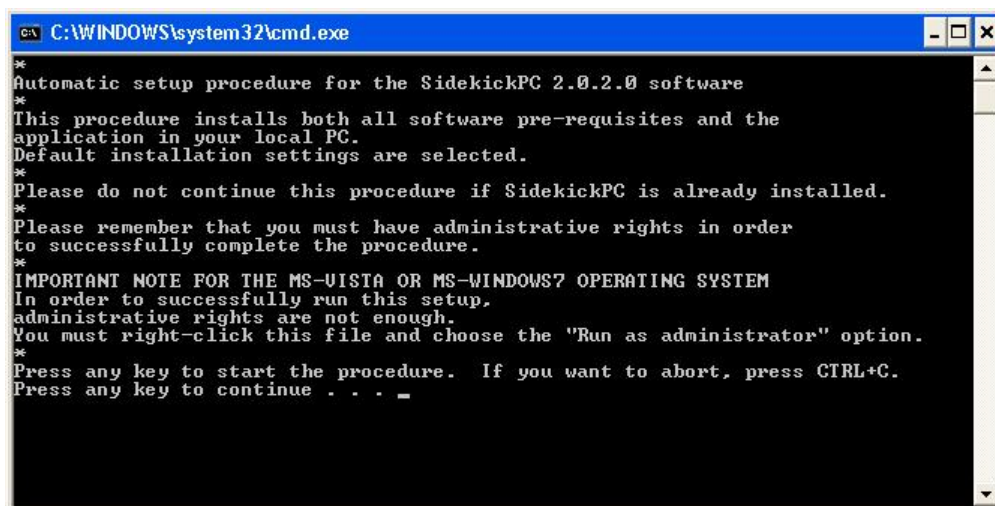
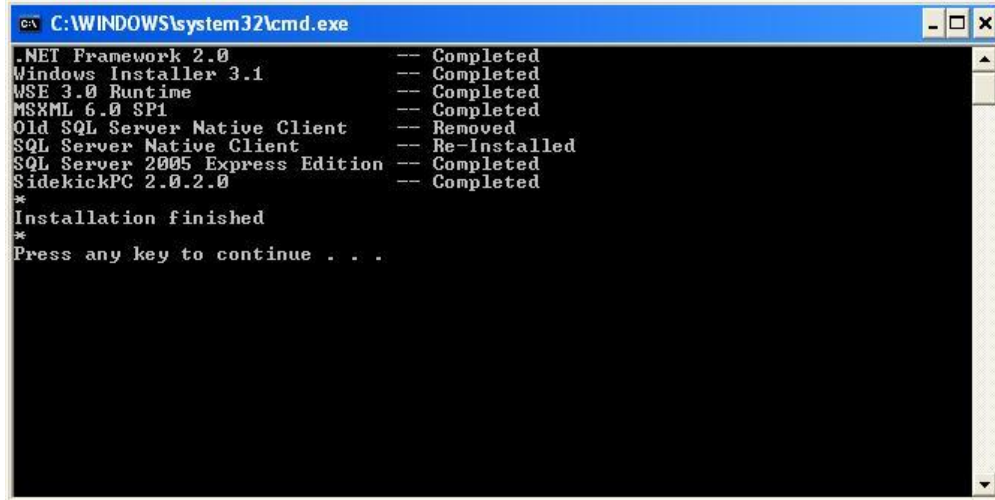


Fig. 1. Automatic setup: welcome setup

If you press CTRL+C you can abort the procedure.

If you press instead any other key combination, the automatic setup starts. Depending on your computer configuration, the setup procedure may last several minutes.

At the end of the automatic setup process, you can see the list of installed software packages:



```
C:\WINDOWS\system32\cmd.exe
.NET Framework 2.0           -- Completed
Windows Installer 3.1       -- Completed
WSE 3.0 Runtime             -- Completed
MSXML 6.0 SP1               -- Completed
Old SQL Server Native Client -- Removed
SQL Server Native Client    -- Re-Installed
SQL Server 2005 Express Edition -- Completed
SidekickPC 2.0.2.0         -- Completed
*
Installation finished
*
Press any key to continue . . .
```

Fig. 2. Automatic setup: end of procedure

There is the possibility that during the setup sometimes goes wrong. In order to help you solve setup problems Electrolux has documented all known setup issues and workarounds.

You can find the solution for these problems here:

<http://sidekick.electrolux.com/SidekickPortal/UsersReservedArea/DownloadDetails.aspx?ContentID=ApplicationNote3>

In case you have problems with the automatic setup procedure, you should try installing SidekickPC in a manual way. Please refer to the Appendix for information concerning the manual setup.

1.3.1. Overriding the default installation folder

If you want to install SidekickPC in an automatic way but not in the default folder (C:\Electrolux\SidekickPC), you can open the **AutoInstall.cmd** file with any text editor (such as, for example, Notepad) and change the following line:

```
SET SK_DIR=C:\Electrolux\SidekickPC
```

You should assign to the **SK_DIR** environment variable the full path of the target directory. For example, if you want to install the software in the D:\ driver instead of the C:\ one you can change the line in the following way:

```
SET SK_DIR=D:\Electrolux\SidekickPC
```

Then you should save the file and quit the editor. Finally run the modified **AutoInstall.cmd** command as the previous paragraph describes.

Please ensure that SK_DIR is assigned a valid folder name.

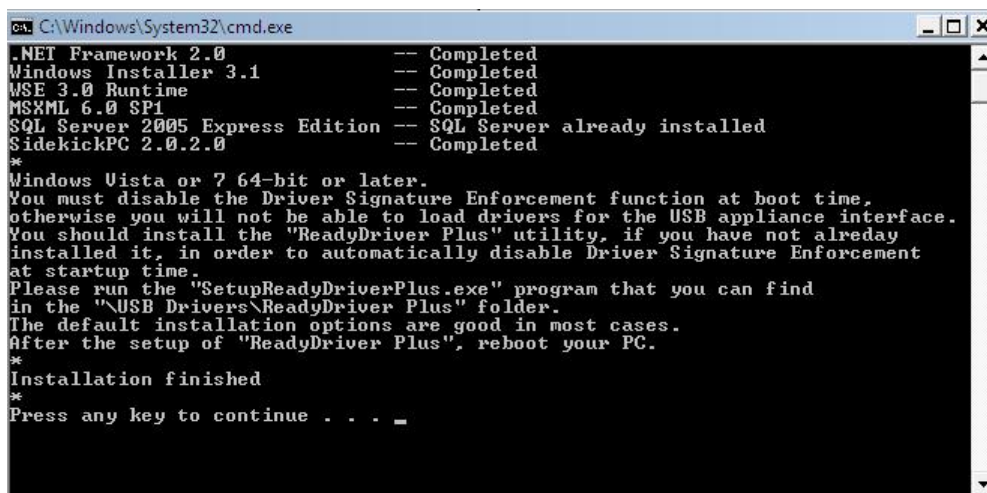
In addition, please remember that you cannot install SidekickPC within the following special directories:

1. **Program Files:** this is the folder that usually contains applications. In English versions of the operating system this is the **C:\Program Files** folder;
2. **Common Application Data:** this is the common application data folder. In English versions of the operating system this is the **C:\Documents and Settings\All Users\Application Data** folder;
3. **System:** this is the folder that contains system files. In English versions of the operating system this is the **C:\Windows\System32** folder.

The setup process by design does not allow you installing SidekickPC in the **Program Files** folder, in order to avoid functional problems under MS-Vista when you execute the program from a limited user account. In this case, the “Virtual Store” feature in MS-Vista would prevent the proper operation of the program.

1.3.2. Disabling Driver Signature Enforcement in Windows Vista and Seven 64-Bit Editions

If you run the automatic setup procedure in a 64-bit edition of Windows Vista or Seven, you get the following information message at the end of the installation:



```
C:\Windows\System32\cmd.exe
.NET Framework 2.0           -- Completed
Windows Installer 3.1       -- Completed
WSE 3.0 Runtime             -- Completed
MSXML 6.0 SP1               -- Completed
SQL Server 2005 Express Edition -- SQL Server already installed
SidekickPC 2.0.2.0          -- Completed
*
Windows Vista or 7 64-bit or later.
You must disable the Driver Signature Enforcement function at boot time,
otherwise you will not be able to load drivers for the USB appliance interface.
You should install the "ReadyDriver Plus" utility, if you have not already
installed it, in order to automatically disable Driver Signature Enforcement
at startup time.
Please run the "SetupReadyDriverPlus.exe" program that you can find
in the "\USB Drivers\ReadyDriver Plus" folder.
The default installation options are good in most cases.
After the setup of "ReadyDriver Plus", reboot your PC.
*
Installation finished
*
Press any key to continue . . . _
```

Fig. 3. Automatic setup: end of procedure in Vista or Seven 64-bit

In 64-bit Windows Vista or Seven (x64 edition), Microsoft enforces requirement for loading of kernel-mode software such as device drivers, filter drivers and services to have Kernel Mode Code Signing (KMCS), especially driver binaries that load at boot time ("boot start drivers") which must contain an embedded signature.

USB drivers for the Electrolux appliance interface modules do not contain a digital signature, although they passed the tests for getting it. As a consequence, by default, you are not able to install these drivers in all 64-bit versions of Windows Vista or Seven.

You must turn off Driver Signature Enforcement at boot time if you want to use unsigned drivers.

One way to disable Driver Signature Enforcement is by pressing F8 during initial boot of the Windows Vista system, and then selecting **Disable Driver Signature Enforcement** in the “**Advanced Boot Options**” menu. However this selection is only good for the session. In other words, you must repetitively do the same thing (pressing F8 to disable signed driver enforcement) again and again on every system reboot.

The “**ReadyDriver Plus**” utility allows you to automatically disable this feature at boot time. You can install it with the “**SetupReadyDriverPlus.exe**” program that you can find in the “\USB Drivers\ReadyDriver Plus” folder in the installation set.

You need to install this utility only once. In other words, if you install SidekickPC and then you remove it and re-install it, you do not need to install **ReadyDriver Plus** the second time.

You should absolutely choose all default options in the setup program. The only option that you may need to override is the number of keystrokes required to get to the Vista entry from the default selection in the boot loader menu:

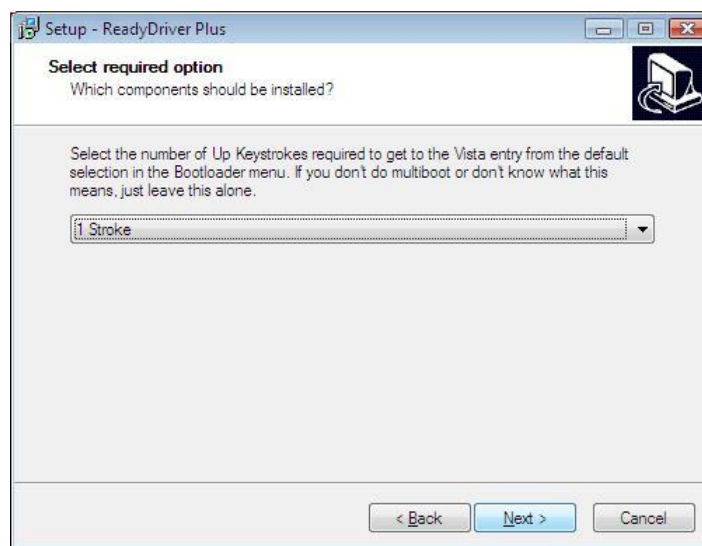


Fig. 4. ReadyDriver Plus setup: number of keystrokes

You should override the above default only if you have a multiboot configuration. In this case, please refer to ReadyDriver Plus information that you can find in the internet.

After installing this utility, you must reboot the PC.

1.3.3. Setup of the USB drivers for the Appliance Connection Kit

After completing the installation of SidekickPC, there is another important installation that you must perform prior leaving the administrative mode in the PC: you must install the USB drivers for the Appliance Connection Kit.

In order to perform this step you must have an Appliance Connection Kit (ACK) that Service Support Europe (SSE) should have given you. You should connect the USB interface of the interface module to the PC by means of the supplied cable. The operating system recognizes that this is the first time that you connect the device to the PC and prompts you for the installation of the drivers.

The drivers are copied to the hard disk during the setup of SidekickPC in the **USB Drivers** directory starting from the installation folder. The default driver directory is:

C:\Electrolux\SidekickPC\USB Drivers

You can find detailed instructions on how to setup the USB drivers in the “**Appliance Interface Modules USB Setup v 3.0**” manual that is installed during the setup of SidekickPC.

Please remember that the sequence of operations that are required to install USB drivers varies a lot depending on the actual operating system and configuration of your PC.

1.3.4. Uninstalling SidekickPC

At a certain point you may want to remove the application from your PC. You can remove it as any other Windows application by means of the **Add/Remove Programs** applet in the **Control Panel**.

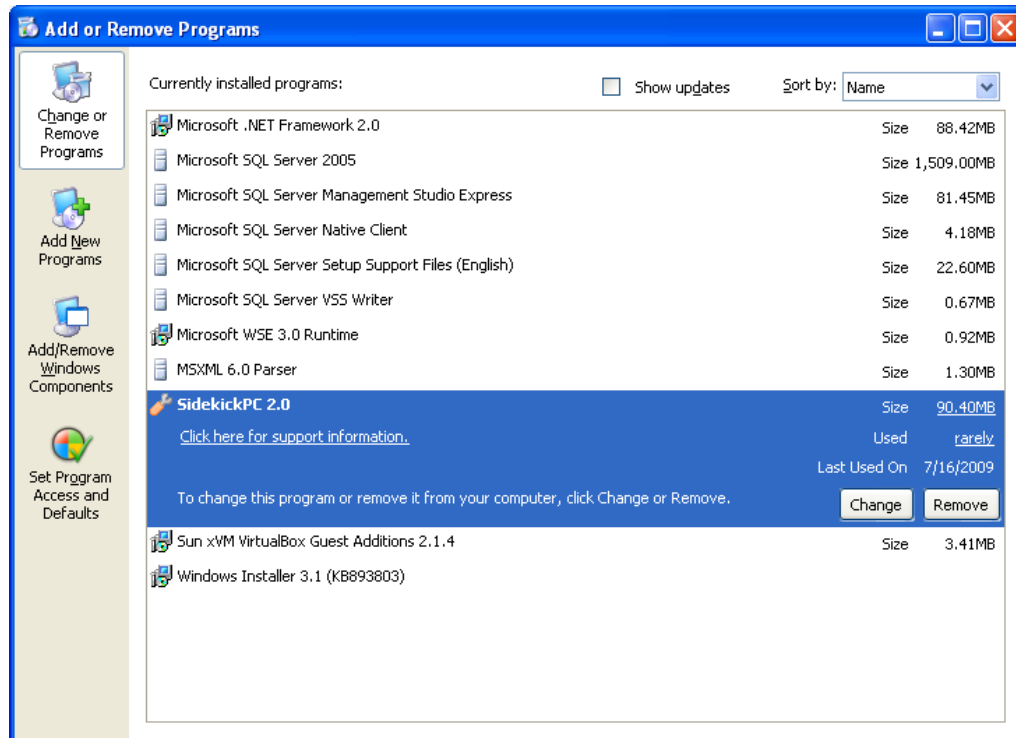


Fig. 5. Removing the SidekickPC application

You must log on as full Administrator in order to remove the software.

When you remove SidekickPC, the uninstall procedure asks you if you want to delete also the local SQL Server database. Please remember that, under Vista, the dialog box that asks you to remove or not the database may be hidden by other windows: the uninstall procedure looks as if it is “frozen”. In this case, you should just check for the presence of the dialog and choose “Yes” or “No” to continue.

1.4. SOFTWARE INITIALIZATION

1.4.1. License Activation

After that you have successfully installed the program and the USB drivers you can log off as Administrator and log on as a normal user. At any rate, the first thing that you are required to do the first time you run SidekickPC is to activate the software license. Please remember that, in order to activate the software license, your PC must be connected to the internet.

The first time you run the software, you can see this message:

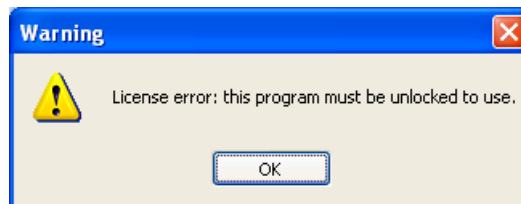


Fig. 6. License Activation Request

After you press the **OK** button, you should execute a few initial configuration steps for your software:

- Language (optional)
- Internet Settings (mandatory when your PC is not directly connected to the internet)
- License Activation (mandatory)

You may want to choose a display language other than English. In this case you must use the dialog box that you can see if you select the **Language** command in the **Options** menu.

If your PC is not directly connected to the internet, you must select proper Internet Settings. You can see the corresponding dialog if you select the **Internet Settings** command in the **Commands** menu. For detailed information on this matter, please refer to the corresponding section later in this chapter.

Finally, you must activate your software license by means of the **License Manager** dialog. You can see this dialog if you select the **License Manager** command in the **Commands** menu. In most cases you only need to specify the **License Number** (if you have not already specified it during manual setup) and press the **Internet Activate** command:

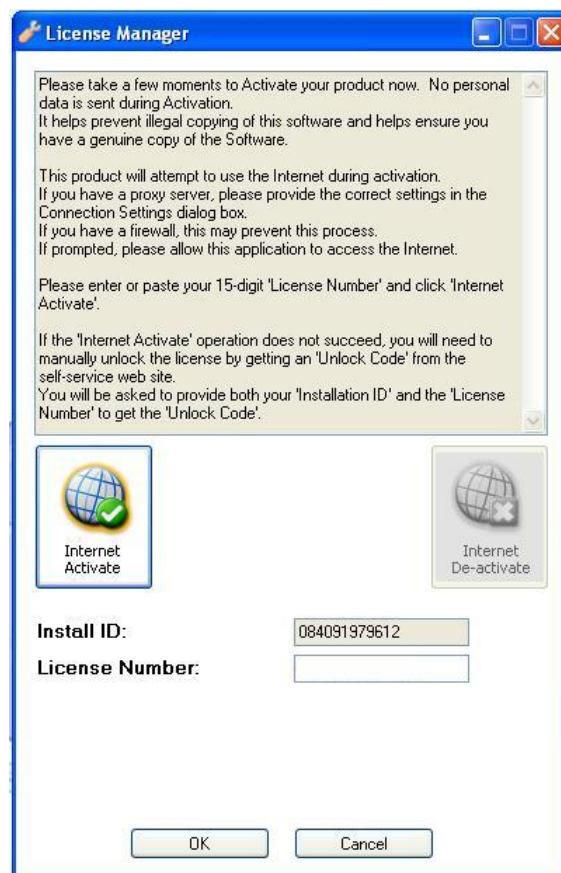


Fig. 7. License Activation Request

After you press the Internet Activate button, you should quickly see the following message:

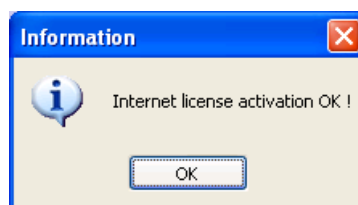


Fig. 8. License Activation Request

Press OK and the License Manager dialog should close.

The **Internet De-activate** command allows you removing the license from your PC. After you de-activate the license in one PC you can activate it in another PC.

1.4.2. Internet Settings

If an internet connection error occurs, please verify that you are really connected to the network and check your proxy settings in the dialog that you can activate in **Commands >> Internet Settings**:

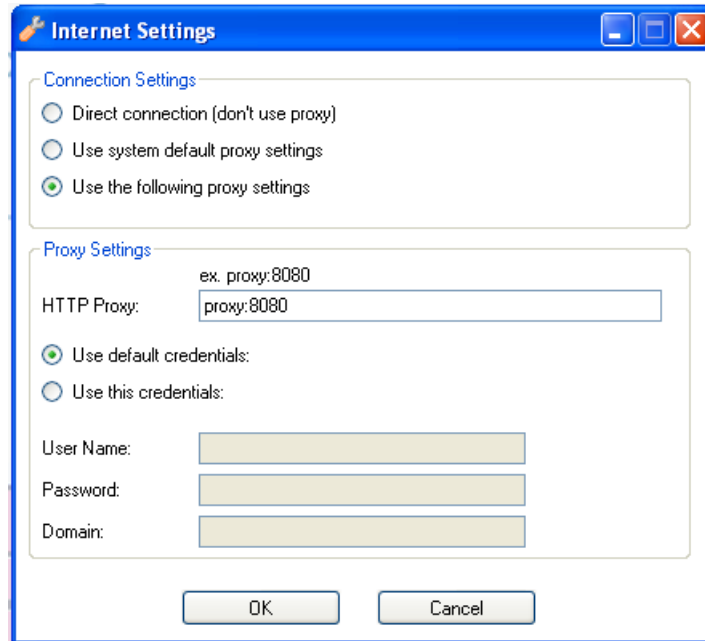


Fig. 9. Internet Settings Dialog

Sometimes invalid proxy settings are the reason of internet license activation and local database update failures. By default the setup program activates the option that uses “system default proxy settings”. In some cases this option does not work and you must explicitly specify your proxy configuration. The **Connection Settings** section lets you specify the way you are connected to the internet. The following options are available:

1. **Direct connection (don't use proxy)**: use this option if your PC is directly connected to the internet;
2. **Use system default proxy settings**: use the settings that you have specified in the Internet Explorer web browser, if you have installed it in your PC. If the proxy you are using requires explicit authentication (username and password), you cannot use this option but you must explicitly specify credentials with the “**Use the following proxy settings**” option;
3. **Use the following proxy settings**: use this option to explicitly specify your proxy settings. If you use this option you must fill-in the **Proxy Settings** section. The **HTTP Proxy** field allows you to specify the DNS name or the IP address of your proxy. The default TCP port for the proxy is 80. You can specify another port by separating the DNS name (or IP address) to the port number by means of a colon. If your proxy requires authentication, you must specify also the **User Name**, **Password**, and **Domain** fields.

1.4.3. Update Dialog

The Update Dialog allows you to perform the update of the local database and the auto-update of the software by means of a connection to the remote web server. You can activate this dialog with the **Commands >> Update** menu item.

Opening the dialog, if the software loads from the configuration file wrong settings, a dialog box advice you that all default parameters will be applied:



Fig. 10. Invalid Parameters Warning dialog

In this case all textbox in the form will be editable.

By default the content of all textbox is read-only; to edit the parameters, unlock the dialog clicking on the bottom right side of the form.



Fig. 11. Lock/Unlock option

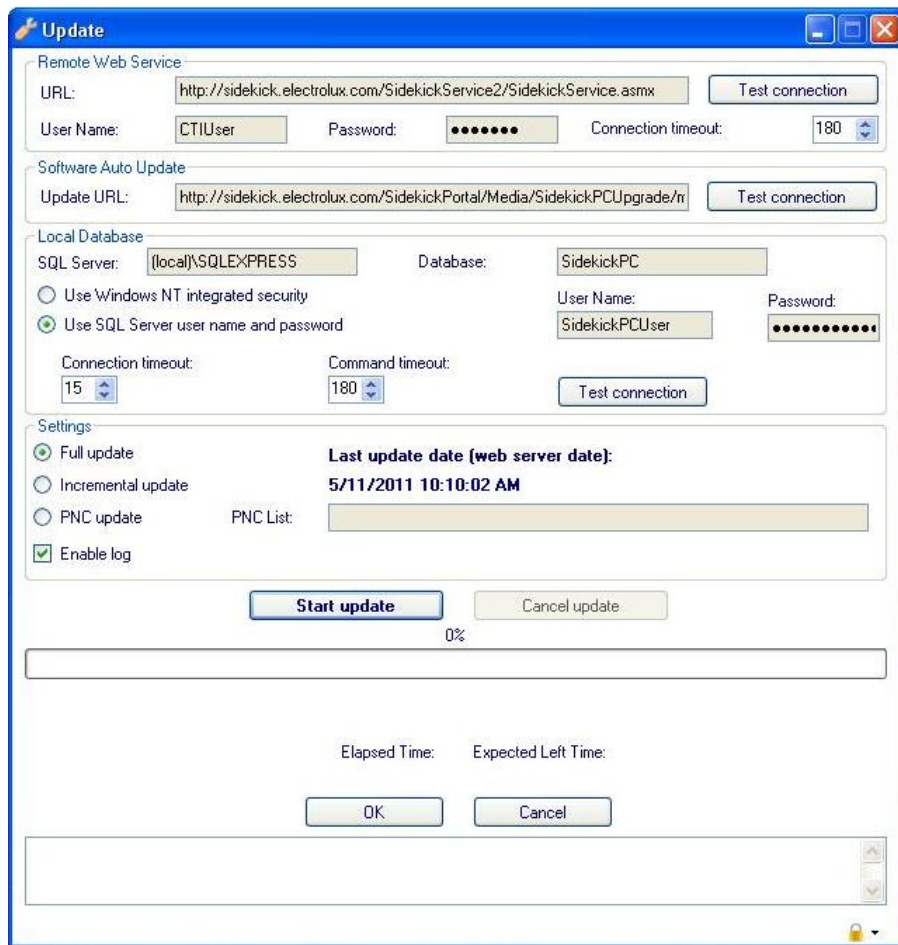
Local database updates occur in a very simple way and are executed through the interaction of SidekickPC with a remote web service that copies information from the Electrolux central Sidekick database to your local computer.

The software fully relies on the local database contents. You cannot operate the software if the local database is empty. For this reason, you must perform the initial full database update, prior using SidekickPC for the first time.

Software auto updates are instead executed through the interaction of the application with the web portal which provides a dedicated section for the publication of update files.

Each update consists in a single ZIP file that contains all necessary information that you need to perform the software update of your local installation of SidekickPC. The system first downloads this file in your local PC, and then it extracts information and applies the software upgrade. For the download of the software upgrade file, the software uses a technology from Microsoft called Background Intelligent Transfer Service (BITS).

Both software and database updates start by clicking the **Start update** button. Every time you issue this command, SidekickPC automatically checks for available software updates before executing the database update procedure.



The 'Update' dialog box is divided into several sections for configuring the update process:

- Remote Web Service:** Includes fields for URL (http://sidekick.electrolux.com/SidekickService2/SidekickService.asmx), User Name (CTIUser), Password (masked), and Connection timeout (180). A 'Test connection' button is present.
- Software Auto Update:** Includes an Update URL (http://sidekick.electrolux.com/SidekickPortal/Media/SidekickPCUpgrade/tr) and a 'Test connection' button.
- Local Database:** Includes fields for SQL Server ((local)\SQLEXPRESS) and Database (SidekickPC). It has two radio buttons: 'Use Windows NT integrated security' (unselected) and 'Use SQL Server user name and password' (selected). The latter has fields for User Name (SidekickPCUser) and Password (masked). It also includes Connection timeout (15) and Command timeout (180) fields, and a 'Test connection' button.
- Settings:** Includes radio buttons for 'Full update' (selected), 'Incremental update', and 'PNC update'. There is a checkbox for 'Enable log' which is checked. A 'PNC List' field is present. A label 'Last update date (web server date):' is followed by the date '5/11/2011 10:10:02 AM'.
- Buttons:** 'Start update' and 'Cancel update' buttons are located below the settings.
- Progress Bar:** A progress bar shows 0% completion.
- Time Fields:** 'Elapsed Time' and 'Expected Left Time' labels are present.
- Final Buttons:** 'OK' and 'Cancel' buttons are at the bottom.

Fig. 12. Update Dialog

The **Remote Web Service** section lets you specify the connection options for the web service:

1. **Service URL:** the intranet or internet address to reach the web service. Depending on the different situations, you can use one of the following URLs:

- a. <http://sidekick.int.electrolux.com/SidekickService2/SidekickService.asmx>
- b. <http://sidekick.electrolux.com/SidekickService2/SidekickService.asmx>

Addresses containing the “int.electrolux” portion are only visible from inside the Electrolux network or through the Access Manager application (intranet). Electrolux may change or remove some of the above URLs in the future. For this reason, you should ask Service Support Europe to know which address you should actually use in your case;

2. **User Name** and **Password** allow you to specify your personal credentials to access the web service. You should use the User Name and Password that you receive by mail when your license is activated. You can use the same credentials to enter also the reserved area in the Sidekick web portal that, depending on the different situations, you can reach with one of the following addresses:

- a. <http://sidekick.int.electrolux.com/SidekickPortal>
- b. <http://sidekick.electrolux.com/SidekickPortal>

Also for the URLs of the Sidekick web portal are valid the same remarks as the URLs for the web service;

3. **Connection Timeout:** this option allows you to specify the maximum response time of the web service in seconds. If your internet connection is very slow and you get a timeout error during updates, you can increase this value and try again;
4. the **Test connection** command allows you to connect to the web service to verify if you have specified the correct settings.

With the manual installation procedure, which this document describes in the appendix, you can explicitly select the initial value for the options in this section. The automatic installation instead defines default settings that you may need to override. For sure you must define at least your personal credentials to access the web service: **User Name** and **Password**.

The **Software Auto Update** section lets you specify the internet address of the web portal section that provides the auto update feature of the software:

1. **Update URL:** the intranet or internet address to reach the web portal. Depending on the different situations, you can use one of the following URLs:
- a. <http://sidekick.int.electrolux.com/SidekickPortal/Media/SidekickPCUpgrade/manifest.xml>
 - b. <http://sidekick.electrolux.com/SidekickPortal/Media/SidekickPCUpgrade/manifest.xml>

Addresses containing the “int.electrolux” portion are only visible from inside the Electrolux network or through the Access Manager application (intranet). Electrolux may

change or remove some of the above URLs in the future. For this reason, you should ask Service Support Europe to know which address you should actually use in your case;

2. the **Test connection** command allows you to connect to the web portal to verify if you have specified the correct internet address.

The **Local Database** section lets you specify the connection options for the local SQL Server database:

1. **Server:** the name of the SQL Server instance that stores your local database. By default the instance name is (local)\SQLEXPRESS. You select the server name at installation time only if you perform the manual installation procedure as this document describes in the appendix;
2. **Database:** the name of the local Sidekick database. By default the database name is **SidekickPC**. You choose the database name at installation time only if you perform the manual installation procedure as this document describes in the appendix;
3. the **Use Windows NT Integrated Security** option allows you to access the database through the integrated security of the operating system;
4. the **Use SQL Server user name and password** option allows you to access the database by means of explicit credentials. This is the default way to access to local database. The **User Name** and **Password** fields allow you to specify your personal credentials to access the database. You choose the user name and the password to access the local database at installation time only if you perform the manual installation procedure as this document describes in the appendix;
5. with the **Connection Timeout** and **Command Timeout** you can specify the connection and command timeouts (in seconds) for the operations related to the local database. Usually you do not need to alter these settings;
6. the **Test Connection** command allows you to connect to the database to verify if you have specified the correct settings.

The **Settings** section lets you specify the type of the update and it shows the date and time of the last update.

1. **Full update:** use this option if you want to perform a full update of the local database. In this case all local data are removed (if any) prior executing a full copy of the remote database contents to the local database. The full update involves all Electrolux appliance models (PNCs) supported by SidekickPC. A full update is mandatory prior using the software for the first time after the setup;
2. **Incremental update:** use this option if you want to download only the new records from the remote database. This is the most common update after the initial setup. The incremental update involves all Electrolux appliance models (PNCs) supported by Sidekick;

3. **PNC update:** use this option if you want to download only the new records related to a certain set of PNCs from the remote database. The **PNC List** entry allows you to specify the list of PNCs (one or more up to 20) that you are interested in. The PNC list is a sequence of comma-separated PNCs. A PNC (Part Number Code) is a numeric code of 9 digits that identifies a certain appliance model from Electrolux. In the **PNC List** you should not supply the ELC (Engineering Level Code): downloading data for a certain PNC means getting the update for all related ELCs. Instead of commas you can also use semicolons (;), hyphens (-), and forward slashes (/) as a separator. An example of a valid PNC List the following one: 914791101,913101218,914521544;
4. **Last update date (server date)** displays the date and time of the last Full or Incremental update. Keep in mind that this is the date of the server not the date of your local PC. Please remember that the PNC update does not change this value;
5. the **Enable log** option creates a log file during the update process. This option is useful for troubleshooting purposes.

The **Start update** command both starts the auto-update of the software and the update of the local database.

If one of the URLs is a not allowed address an error dialog box is shown:

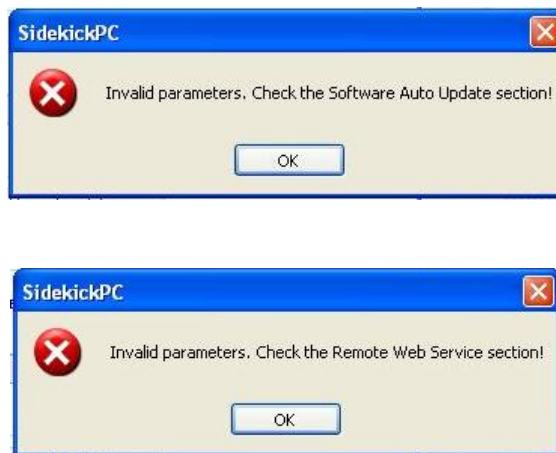


Fig. 13. Invalid URLs: error dialogs

1.4.4. Software Auto Update

Every time you click on **Start update** button, the software checks if there is a software update available.

If not, the process continues with the update of the local database. Instead, in case an update is available, a dialog box that specifies a short description of the upgrade is shown:

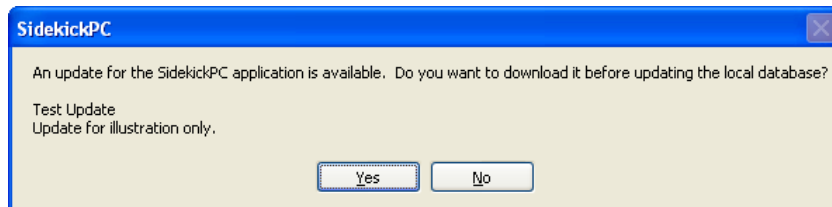


Fig. 14. Optional Software Update Notification

If the update is mandatory, the software informs you that the update will be applied before proceeding with the local database update. If the update is instead optional you can skip it and start immediately the database update.

By clicking the **Yes** button the download of the upgrade files starts. During the download of the software upgrade file, the Update dialog box shows you a progress bar and some messages that indicate the state of the process.

When the download is finished a message asks you to quit the application in order to apply the changes.

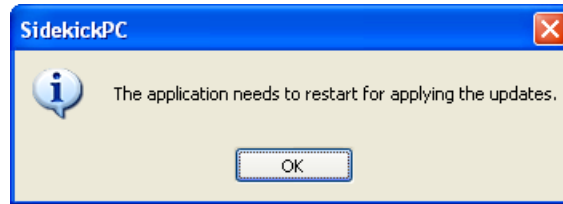


Fig. 15. End of Software Update Download

By pressing the **OK** button, the real software update starts. The downloaded files are extracted from the ZIP archive and, after a backup of the existing application files, the current application files are replaced with the new ones. In addition, the software upgrade may also involve changes in the configuration parameters and/or in the structure of the local database.

While the system applies the software upgrade you can see a dialog that shows you some information. As soon as this process finishes you should press the **OK** button in the SidekickPC Software Upgrade dialog:

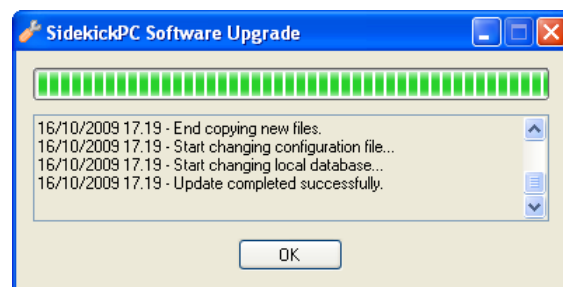


Fig. 16. End of Software Update Application

After you press the **OK** button, SidekickPC restarts automatically.

If any errors occur during the software upgrade process, the system rolls-back all changes.

1.4.5. Database Update

The update of the local database starts when you press the **Start update** button and either there is no software update available, or after that you have decided to skip an update that is not mandatory.

Depending on your update options and internet connection speed, the update process may require a long time to complete. During the update, a progress bar and some feedback messages indicate the state of the update process. The update occurs within a local database transaction. This means that if you press **Cancel update** or any error occurs during the update, all changes to the local data will be roll-backed and the local data will stay unchanged. Changes to the local data are committed only at the end of the update, if no error occurs.

The **Cancel update** command cancels the update procedure.

The **OK** button closes the dialog and saves the settings you have changed.

The **Cancel** button closes the dialog without saving the settings you have changed.

As previously specified, prior using SidekickPC for the first time you must execute a Full update. Please press the **Test Connection** buttons to check if the connections to the remote web service and to the local database work. If necessary, select the **Full Update** option and then press the **Start update** command. You should see feedback messages indicating the progress of the operation. The initial full update may take several minutes or even hours to complete, please be patient. At the end you should see the completion notification:

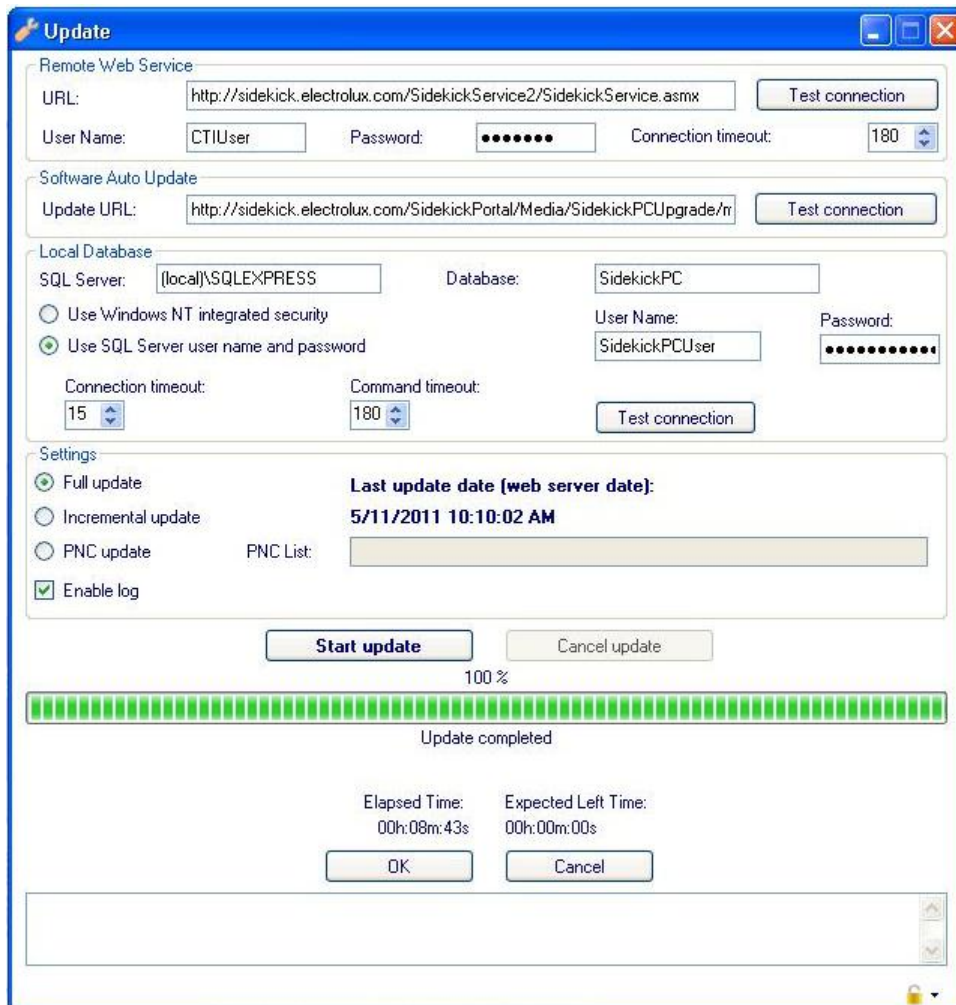


Fig. 17. Update Dialog: operation complete

Press **OK** and you are ready to start using the software.

2. HARDWARE CONNECTIONS

This chapter provides information regarding the correct way to connect and disconnect the Sidekick system to the appliance under test or to the electronic board to configure.

2.1. CONNECTING THE APPLIANCE TO THE PC

CAUTION! In order to avoid the risk of electrical shock only skilled personnel should use and install the Appliance Connection Kit. The connection of all items should occur only when the appliance is powered off and, if possible, unplugged from the power supply. Also the adapter module should be off.

If the Appliance Connection Kit uses the USB interface of your PC, please remember that you should always employ a fully-shielded High-Speed USB 2.0 cable. This type of USB cable provides a good level of reliability for the communication between the PC and the appliance.

If you want to diagnose an appliance or update its electronic board configuration, you should connect it to the PC. To connect the appliance to the PC you need to do the following steps:

- Turn off the interface module (if it has a separate power supply).
- If necessary, disconnect the interface module from the PC (disconnect the RS-232 cable or the USB cable).
- Turn off the appliance and, if possible, unplug it from the power supply.
- **Important: wait at least 5 seconds BEFORE touching the board or the interface cable to prevent Electro Static Discharge (ESD) damage risk.**
- Open the appliance cabinet in order to reach the electronic board connector. For instance in a typical washing-machine: remove 2 screws from the cover on the backside of appliance.

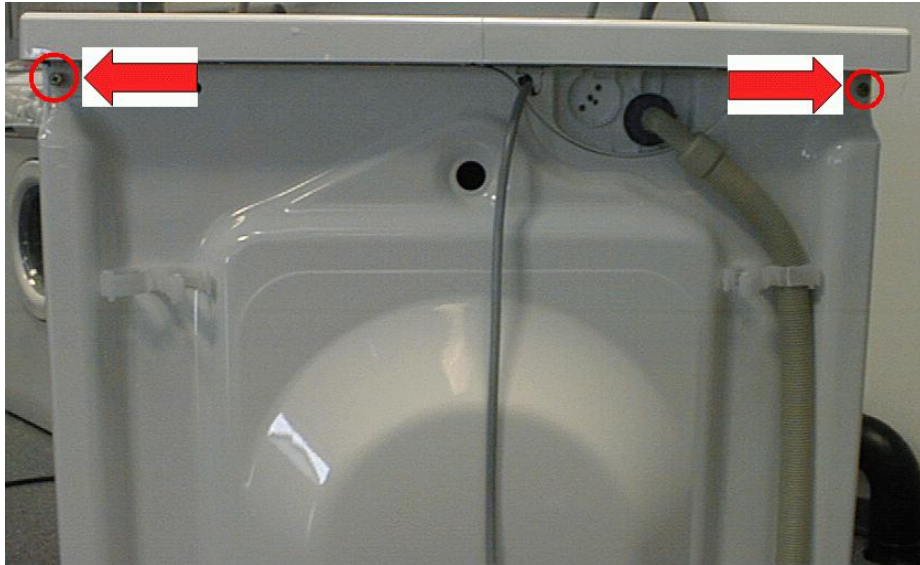


Fig. 18. Appliance backside view

- Typical washing-machine example: slide the top cover back and (if necessary) remove the plastic shield from the electronic board using the plastic tips, which you find at each end. In some types of appliance you only need to open the plastic tip that protects the interface connector in the electronic board.
- Connect the adapter module to the appliance using the interface cable as shown in the following picture.



Fig. 19. Appliance with adapter connected

- Connect back the appliance to the power supply and turn it on.
- Turn on the adapter module (if it has a separate power supply).

- Connect the adapter module to the PC using either the modem cable (for the RS-232 interface) or the USB cable.

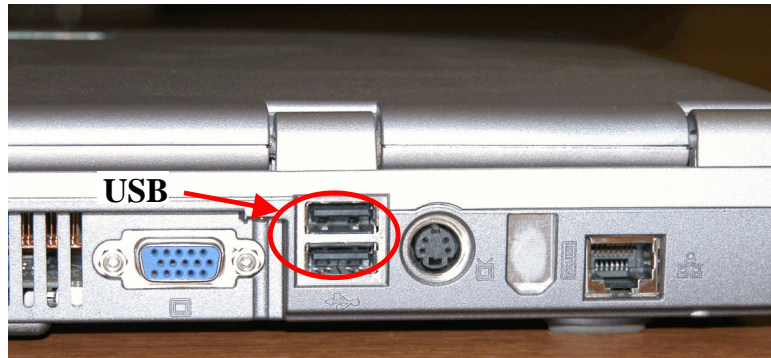


Fig. 20. Laptop PC backside view

- Run the SidekickPC software.

The above sequence of steps guarantees user's safety and reduces the risk of damage due to electrostatic charges. It also avoids the storage of the FREQUENCY OF APPLIANCE INCORRECT (EH1 or EB1 in Fabric Care appliances) alarm that is generated when the board is supplied by the interface module instead of the mains power supply (230 VAC).

VERY IMPORTANT NOTE!

Since the interface module is able to power the electronic board even if the appliance is not connected to the mains supply, the appliance may detect false alarm conditions if the adapter is turned on before the appliance.

For this reason you should ALWAYS turn on the appliance under test BEFORE turning on the adapter and connecting it to the Personal Computer.

Conversely, you should ALWAYS turn off the adapter and disconnect it from the Personal Computer BEFORE turning off the appliance under test.

2.2. DISCONNECTING THE APPLIANCE FROM THE PC

You should do the following steps to disconnect the PC from the appliance:

- Disconnect the USB cable from the PC.
- Turn off the appliance and, if it possible, unplug it from the mains power supply.
- **Important: after the power off of the appliance, wait at least 5 seconds BEFORE touching the board or the interface cable to prevent Electro Static Discharge (ESD) damage risk.**
- Disconnect the adapter module interface cable from the electronic board.

The above sequence of steps guarantees user's safety and reduces the risk of damage due to electrostatic charges. It also avoids the storage of the FREQUENCY OF APPLIANCE INCORRECT (EH1 or EB1 in Fabric Care appliances) alarm that is generated when the board is supplied by the interface module instead of the mains power supply (230 VAC).

2.3. CONNECTING THE SPARE BOARD TO THE PC

CAUTION!

In order to avoid the risk of electrical shock only skilled personnel should use and install the Appliance Connection Kit. You should NEVER power on the spare board from the mains supply (230VAC) when it is not installed in the appliance.

The adapter interface module provides the necessary power to the board during the configuration procedure, without the need of connecting the mains supply.

Before handling the electronic board, you should discharge your body from possible electrostatic charges, by touching one conductive object connected to earth.

In addition, you should never touch both neither the board nor the adapter module interface connector during configuration program download and, in general, when the board supply is present. These precautions reduce the risk of damaging the electronic board because of electrostatic discharges.

If you want to create a spare board for a specified appliance, you should connect the naked board to the PC for the configuration. To connect the board to the PC you need to do the following steps:

- Turn off the interface module (if it has a separate power supply).

- Connect the adapter module to the board using the interface cable as shown in the following picture.



Fig. 21. Board with appliance cable connected

- Connect the adapter module to the PC using either the modem cable (for the RS-232 interface) or the USB cable and turn on the adapter module. This operation turns on the spare board as well.

VERY IMPORTANT NOTES!

You may hear an intermittent beep when the spare board is powered on by the adapter. This beep is due to the fact that the board detects a false alarm condition since it is not yet installed in the appliance.

When you turn on an appliance for the first time after you have reconfigured it, or after you have replaced the electronic board, the machine may automatically start the electric test (the electric test is only used in the factory at the end of the assembly line). Turn the appliance on and off to set it back in normal mode.

2.4. DISCONNECTING THE SPARE BOARD FROM THE PC

CAUTION!

In order to avoid the risk of electrical shock only skilled personnel should use and install the Appliance Connection Kit. You should NEVER power on the spare board from the mains supply (230VAC) when it is not installed in the appliance.

The adapter interface module provides the necessary power to the board during the configuration procedure, without the need of connecting the mains supply.

Before handling the electronic board, you should discharge your body from possible electrostatic charges, by touching one conductive object connected to earth.

In addition, you should never touch both neither the board nor the adapter module interface connector during configuration program download and, in general, when the board supply is present. These precautions reduce the risk of damaging the electronic board because of electrostatic discharges.

You should do the following steps to disconnect the PC from the spare board:

- Disconnect the USB cable from the PC.
- **Important: wait at least 5 seconds BEFORE touching the board or the interface cable to prevent Electro Static Discharge (ESD) damage risk.**
- Disconnect the adapter module interface cable from the board.

3. SOFTWARE OPERATION

This chapter deals with the **SidekickPC** utility functions. The program consists of a main window that is a container of all other functional windows (forms). The main window follows the Multiple Document Interface (MDI) approach. Using MDI allows you opening many forms at the same time during the diagnostic procedure. The following figure displays the main form:

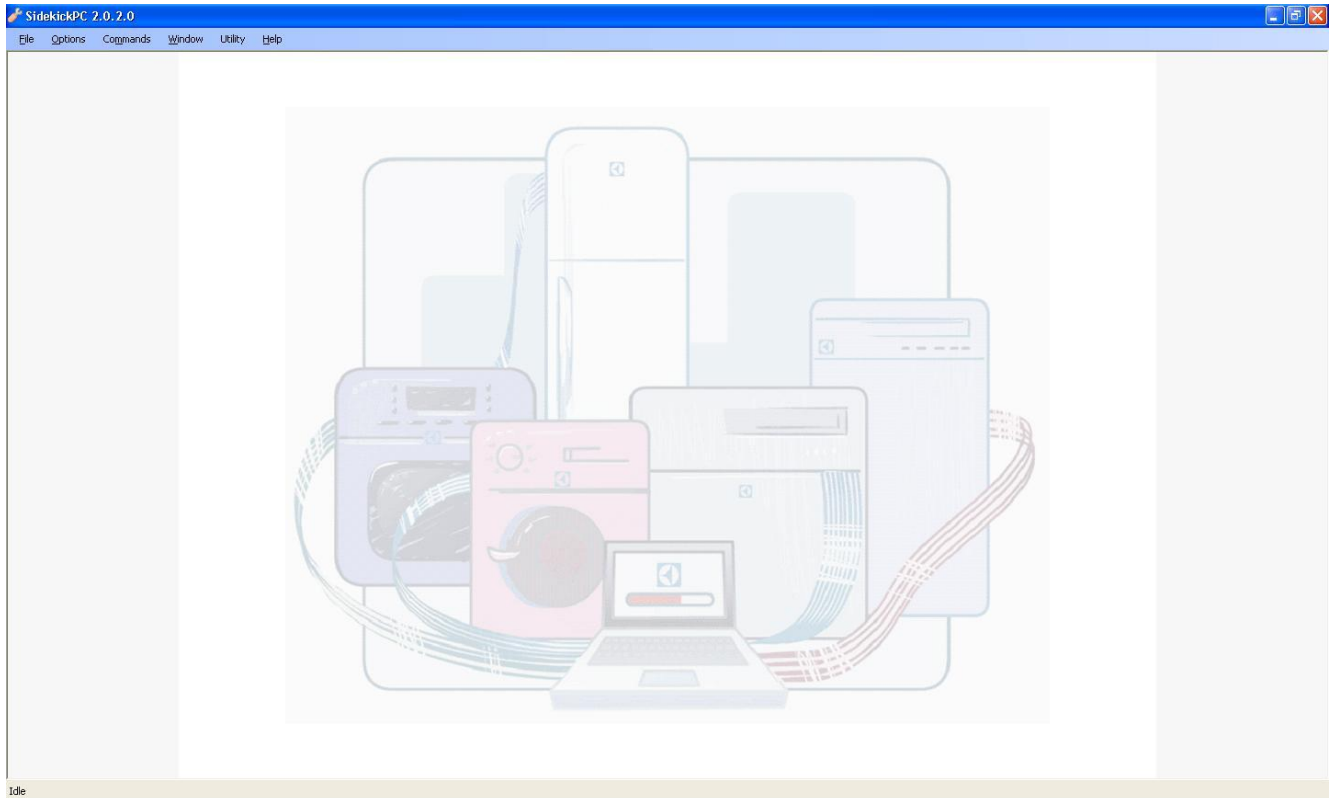


Fig. 22. Main Form

The main form contains the **pull-down menu** placed just below the title bar. The main menu items are: **File**, **Options**, **Commands**, **Window**, **Utility**, and **Help**.

The **Start Page** command in the File menu activates the Startup Form.

The **Exit** command in the File menu quits the application.

The **Communication** command in the Options menu shows the **Connection Settings** dialog box that allows specifying the maximum communication speed for connecting to the target appliance or to the board:

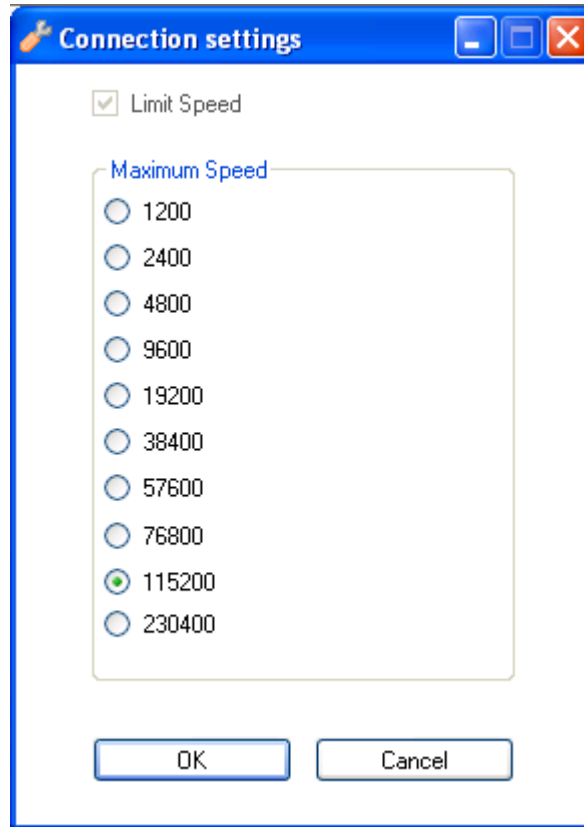


Fig. 23. Connection Settings

You do not usually need to change any settings in this dialog box.

The **Language** command in the Options menu shows the **Language** dialog box that allows choosing the display language:

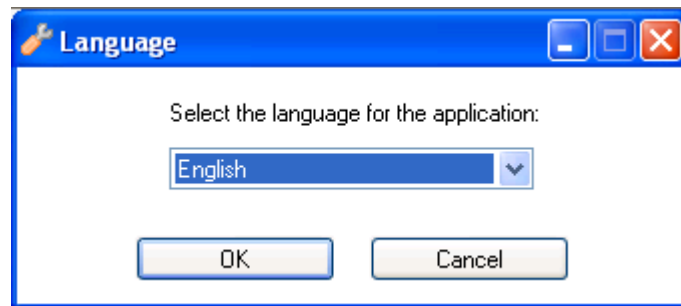


Fig. 24. Language Selection

The **Update** command in the Commands menu shows the Update Dialog already described in Chapter 1.

The **License Manager** command in the Commands menu shows the License Manager Dialog already described in Chapter 1.

The **Internet Settings** command in the Commands menu shows the Internet Settings Dialog already described in Chapter 1.

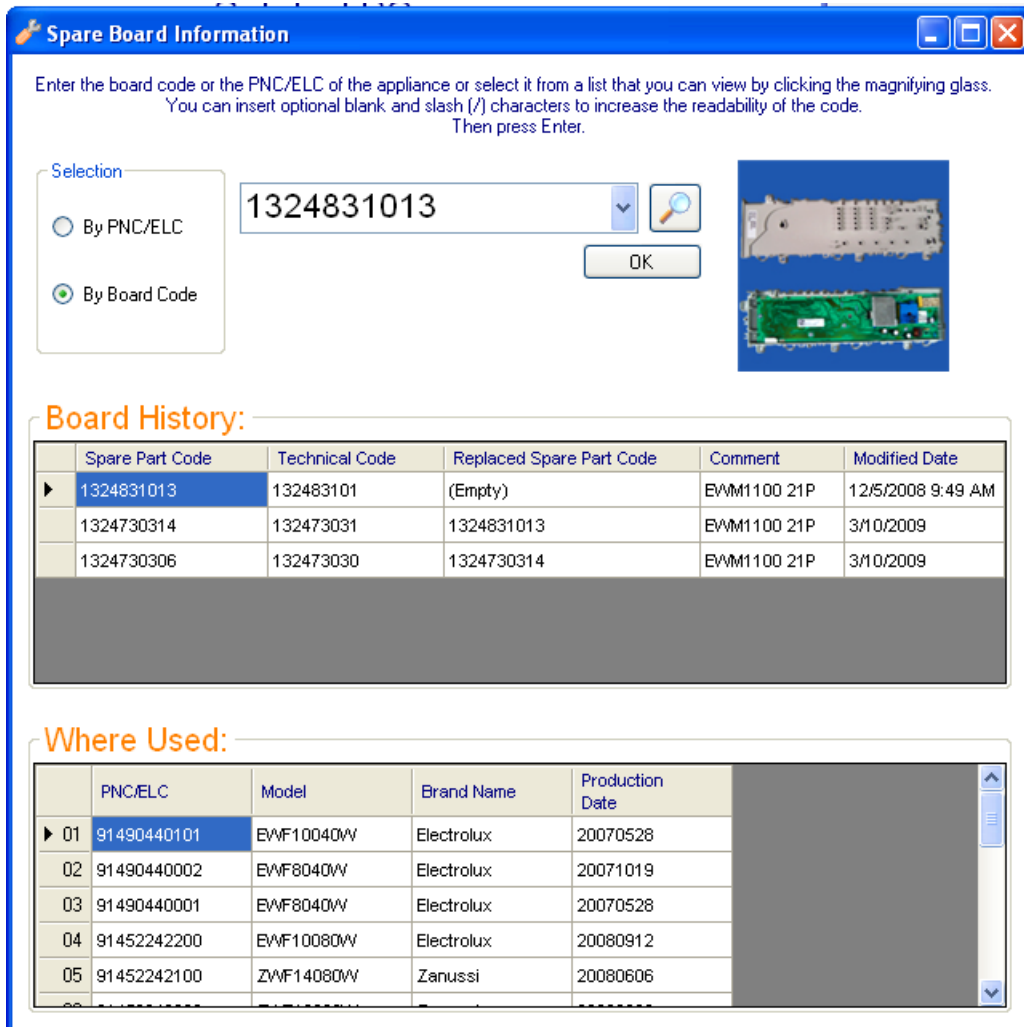
The **Windows** menu contains various commands that simplify arrangement of forms in the workspace.

The **Utility** menu contains the **Spare Board Information** command that allows you to see all information from TDS (Technical Documentation System) database about a spare board code, the replacement history and the list of all PNC/ELC that are related to the selected board. The next paragraph describes this function.

The **Help** menu contains only the command to display the About Dialog box.

3.1. Spare Board Information Form

The **Spare Board Information** window displays all information about a spare board starting either from the board code (with check digit) or from the PNC/ELC of the appliance.



Selection

☐ By PNC/ELC

☒ By Board Code

1324831013

OK

Board History:

	Spare Part Code	Technical Code	Replaced Spare Part Code	Comment	Modified Date
▶	1324831013	132483101	(Empty)	EVM1100 21P	12/5/2008 9:49 AM
	1324730314	132473031	1324831013	EVM1100 21P	3/10/2009
	1324730306	132473030	1324730314	EVM1100 21P	3/10/2009

Where Used:

	PNC/ELC	Model	Brand Name	Production Date
▶ 01	91490440101	EWF10040W	Electrolux	20070528
02	91490440002	EWF8040W	Electrolux	20071019
03	91490440001	EWF8040W	Electrolux	20070528
04	91452242200	EWF10080W	Electrolux	20080912
05	91452242100	ZWF14080W	Zanussi	20080606

Fig. 25. Spare Board Information Form

In the upper left side of this form there is the **Selection** group that lets you choose search criteria. You can start your search either from the PNC/ELC of the appliance or from the Spare Part Code that in TDS identifies the generic not configured electronic board.

The text field lets you enter either the **PNC/ELC** or the **Board Code**.

You can insert optional blank and slash (/) characters in order to increase the readability of the code that you enter.

When you click the combo box, a drop-down list, containing the last 5 used codes appears.



If you press this button, a list containing all the PNC/ELC Codes or Board Codes stored in the database appears.

You can select one item from the generated list and you have the possibility to restrict the selection list by filling the **Starts with** field.

Board Code List

Starts with:

Board Code
1081759548
1081759563
1081759571
1081759589
1081759647
1081759654
1082353812
1082353846
1082353853
1082353879
1082447804
1082447812
1082447820
1082447838
1082447846
1082447879
1082447887

OK Cancel

PNC/ELC List

Starts with:

PNC	ELC
911234939	01
911936023	00
914527707	01
911616016	00
911925008	02
911372211	00
914016051	00
916093832	01
911946228	02
911928604	02
911235308	00
911515028	01
911929273	02
911929292	00
911926671	01
914791101	00
916093905	00
916096225	00

OK Cancel

Fig. 26. Board Code List and PNC/ELC List Forms

When you enter the code and press either the **ENTER** key or the **OK** button, SidekickPC searches for matches with the specified code in the local database. If it finds the specified code, the software automatically populates the form.

This form shows search results in 2 grids.

The upper grid provides the **Board History** that shows a list of spare board codes (with related Technical Code) as well as additional information. In particular **Replaced Spare Part Code** shows the code of a more recent board that replaces the board identified by the current record. If the value of this field is **(Empty)** this board is the most recent one since it has not been replaced yet.

The software sorts the list so that the first record refers to the most recent board according to the information from TDS.

The software highlights in red the board code used to populate the grid. At the upper right side of the form the software also displays a picture of this board, if available.

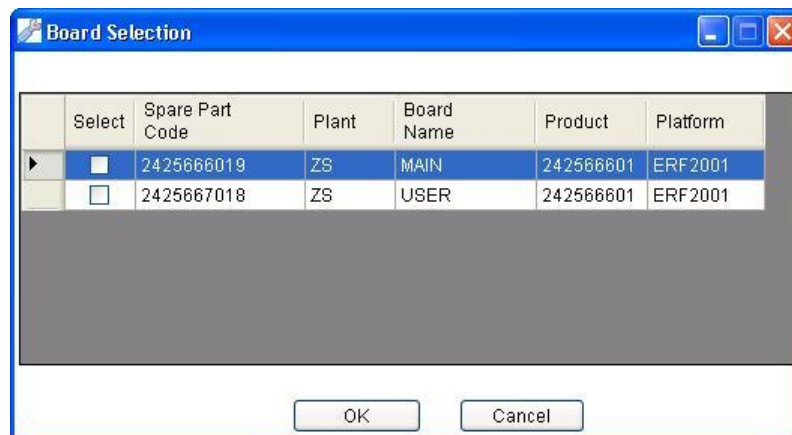
While the **Spare Part Code** refers to the code that you should use to buy the not configured board from Electrolux, the **Technical Code** indicates the code that Electrolux uses to buy it from suppliers.

In many cases the Technical Code and the Spare Part Code are the same except the check digit. However, sometimes, these codes are different.

The Technical Code is often printed in a label attached to the board or to its plastic case. As a consequence, the code that you read in this label may differ from the code that you use to buy the part from Electrolux.

The lower grid, **Where Used**, shows all PNC/ELCs, with the corresponding Model, Brand, and date of first production that employ the selected board code. This information is similar to the "Where Used" function in TDS, with the advantage that it takes into consideration the replacement history, not only the bill of material from factories at the date of production.

In some cases, selecting a code by PNC/ELC, more than one board may be present in that specific product. As a consequence, more than one record may be found inside the local database. In this case a list containing **Spare Part Code**, **Plant**, **Board Name**, **Product**, and **Platform** appears, allowing you to choose the specific electronic board that you want to analyze.



The image shows a 'Board Selection' dialog box with a table containing two rows of data. The first row is highlighted in blue. Below the table are 'OK' and 'Cancel' buttons.

Select	Spare Part Code	Plant	Board Name	Product	Platform
<input checked="" type="checkbox"/>	2425666019	ZS	MAIN	242566601	ERF2001
<input type="checkbox"/>	2425667018	ZS	USER	242566601	ERF2001

Fig. 27. Board Selection Form

3.2. Startup Form

When you run the program you see the Startup form:

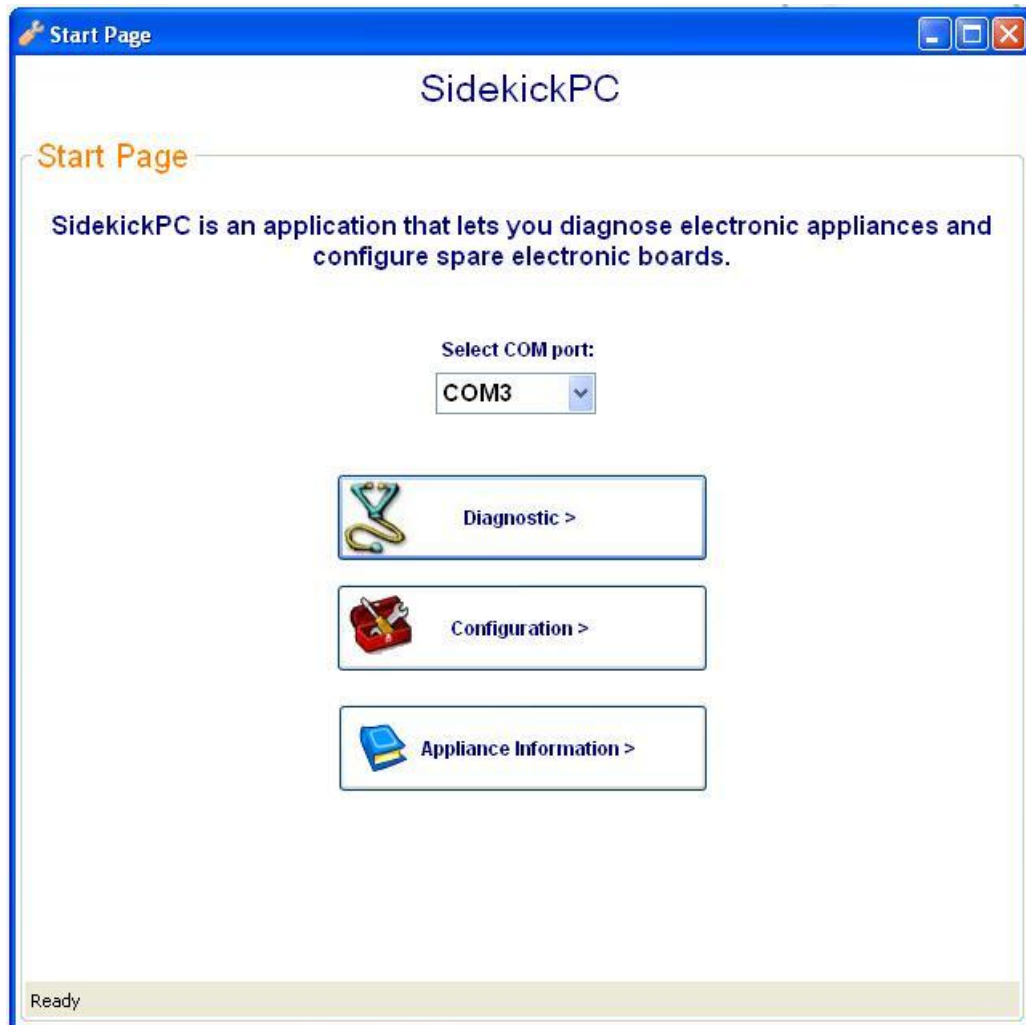


Fig. 28. Startup Form

There are four objects on the form: the **Select COM port** list, the **Diagnostic** button, the **Configuration** button and the **Appliance Information** button.

The **Select COM port** list lets you choose the communication port. The software automatically detects the available serial ports on the PC and, if possible, it selects the port that you have selected in the previous SidekickPC session.

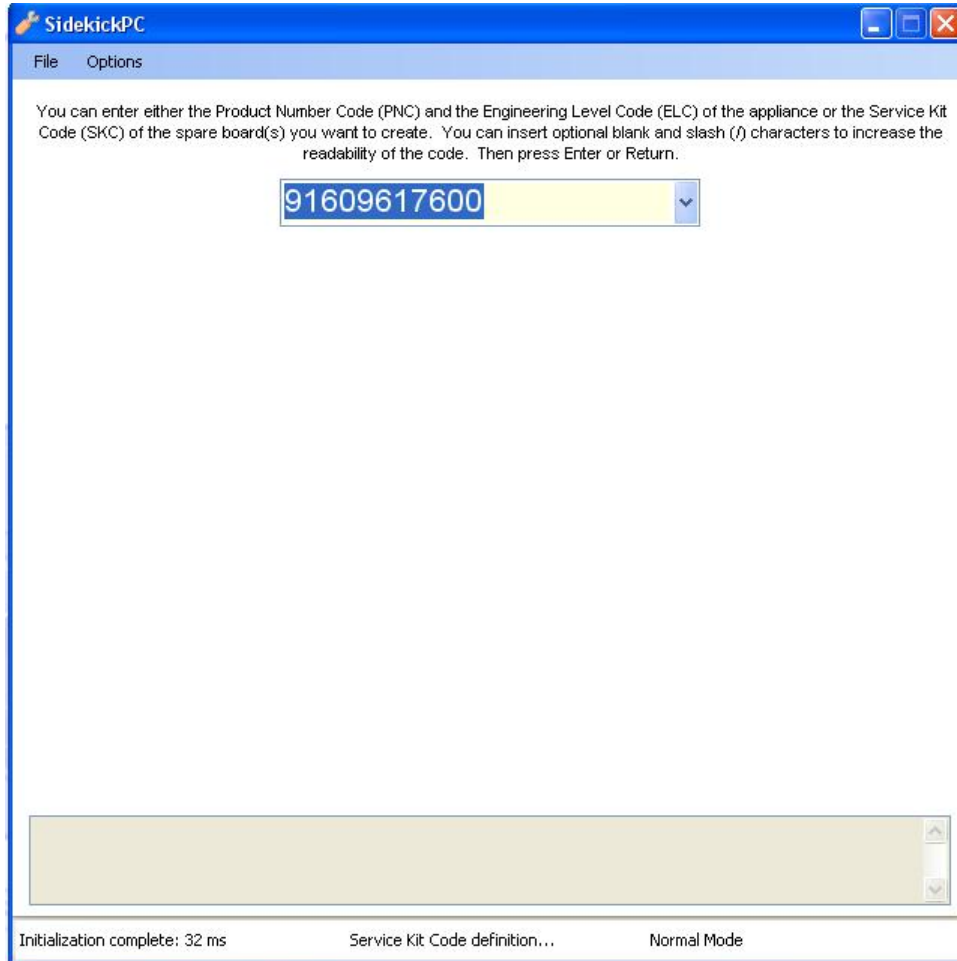
The **Diagnostic** button lets you start the appliance diagnostics function. When you press this button the software connects to the appliance under test and identifies it. Then the program shows you the Identification form with the main configuration parameters in the connected appliance.

The **Configuration** button lets you enter to the board configuration function. When you press this button, SidekickPC shows you the Board Configuration form.

The **Appliance Information** button lets you to get detailed information regarding test, alarms, and the troubleshooting procedures of a specific appliance model that you identify by means of the PNC/ELC. Please remember that this function only works for those appliances that SidekickPC is able to diagnose.

3.3. Configuration Form

This is the form that appears when you press the **Configuration** button in the Startup Form. The Configuration form allows you either to create a spare board or to upgrade the electronic configuration of an appliance.



The screenshot shows a Windows-style application window titled "SidekickPC". It has a menu bar with "File" and "Options". The main text area contains instructions: "You can enter either the Product Number Code (PNC) and the Engineering Level Code (ELC) of the appliance or the Service Kit Code (SKC) of the spare board(s) you want to create. You can insert optional blank and slash (/) characters to increase the readability of the code. Then press Enter or Return." Below this is a text input field containing the code "91609617600". At the bottom of the window, there is a status bar with three items: "Initialization complete: 32 ms", "Service Kit Code definition...", and "Normal Mode".

Fig. 29. Configuration Form

The **Code Selection** field lets you enter either the **PNC/ELC** of the appliance that you want to upgrade or the **Service Kit Code (SKC)** of the configured spare board that you want to create.

The PNC/ELC is always an 11-digit code that identifies the Electrolux appliance model.

The SKC instead identifies the code of the configured spare board in the TDS system.

In **Fabric Care**, **Dish Care**, and **Food Preservation** product lines, configured boards are coded as spare part for each PNC/ELC in the following way:

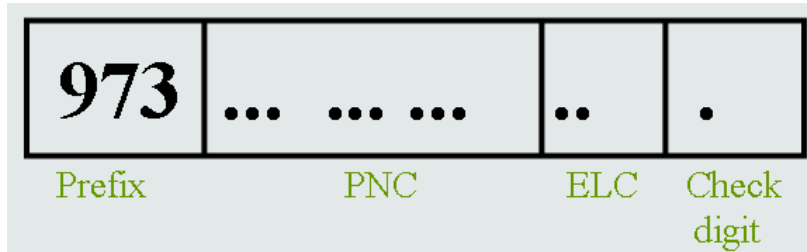


Fig. 30. SKC Convention for Fabric Care, Dish Care, and Food Preservation

As you can see, in the above case, the SKC is a 15-digit code beginning with 973. A PNC/ELC code corresponds to one SKC and vice versa.

Instead, the **Food Preparation** product line does not follow the previous convention for coding configured spare boards. In this case, they use the factory Article Number Code (ANC) with a check digit:

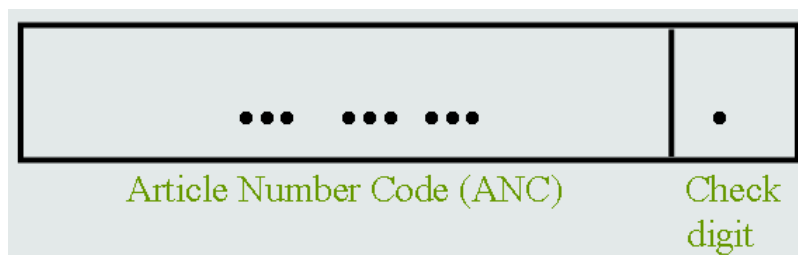



Fig. 31. SKC Convention for Food Preparation

In this case, the SKC is a 10-digit code.

You can insert optional blank characters, hyphens and slashes, between one digit and another, to increase the readability of the inserted code. The software ignores all extra characters that you may insert for improving the readability of the code.

SidekickPC keeps a list with the most recently used codes. You can click the select button () on the right side of the Code Selection field and choose one of these items instead of manually entering the digits each time you enter a new code.

When you press the ENTER key, SidekickPC searches for matches with the specified code in the internal database. If it finds the specified code, SidekickPC automatically processes the information for the configuration of the specified spare board.

If the specified code does not exist in the database, the software just shows an error message.

If the specified code exists in the database, the corresponding **Brand/Model** and if available, two images (photos of the naked board and the adapter) appear on the form.

You can then enter the number of identical boards to configure:



The screenshot shows the SidekickPC application window. The title bar reads 'SidekickPC'. The menu bar has 'File' and 'Options'. The main text area contains instructions: 'You can enter either the Product Number Code (PNC) and the Engineering Level Code (ELC) of the appliance or the Service Kit Code (SKC) of the spare board(s) you want to create. You can insert optional blank and slash (/) characters to increase the readability of the code. Then press Enter or Return.' Below this is a text input field containing '91609617600'. The 'Brand / Model:' is displayed as 'AEG Electrolux T59840'. Below this, it says 'You need the following naked board and adapter.' The 'Naked Board:' is '1364037208' and the 'Adapter:' is 'Standard DAAS Adapter'. To the right of the adapter name is an image of a DAAS adapter. Below the adapter image, the text 'Image Not Available' is displayed. At the bottom of the main area, it says 'Specify the quantity of boards you want to configure. Press Enter or Return to go on or ESC to abort.' Below this is a spin box with the value '1'. At the very bottom of the window, there is a status bar with three items: 'Selected Serial Port: COM4', 'Quantity definition...', and 'Normal Mode'.

Fig. 32. Quantity Definition

After the quantity definition, press the ENTER key again and you are ready to start the configuration. This means that you can connect the appliance board to the PC and press OK to start the programming procedure:



Fig. 33. Start Programming

When you press the OK button to start the configuration of the board, at first the program identifies the naked board. If the naked board you are using is not suitable for the appliance model you have selected, SidekickPC issues an error message and prevents you further actions with the board. Otherwise it immediately starts the board configuration procedure.

The board configuration procedure occurs using the information contained in the local database. During the execution of this command the target device goes into a special mode. After the programming procedure, SidekickPC resets the board and it performs a check of the configuration.

The **Last operation results** textbox shows the result of the last board programming operation. The GREEN color highlights successful result, RED failure. In case of success, you can see statistics regarding the operation. In case of failure you can see a description of the error:



Fig. 34. Last operation result

Please note that all board programming operations are recorded in the local database (Database Log) and that are uploaded to the remote server whenever you execute a database update operation.

VERY IMPORTANT NOTES!

The board may become unusable if the board programming operation fails for any reason.

During the programming procedure it is highly recommended not to detach the connection cables, not to switch off the interface module, not to touch the board to prevent Electro Static Discharge (ESD) damage risk or otherwise interrupt the operation since the board may become unusable. Interrupting a programming operation may lead to an unusable naked board.

In the above cases, recovering the board may require special programming tools. This program does not provide this capability.

3.3.1. Configuration Form Menu Commands

The Configuration form has a pull-down menu with the following items: **File** and **Options**.

The **Exit** command in the File menu just closes the form.

The **Additional Verify** command in the Options menu shows the **Additional Verify** dialog box that allows activating an extra configuration step after the board programming procedure:



Fig. 35. Additional Verify Dialog

This dialog allows you to enable/disable an additional board configuration check and set the coverage of memory locations (in percent of whole memory space) that will be checked after the programming procedure. Greater values mean more verifying time. The minimum coverage value is 5%.

The **Programming Log** command in the Options menu shows the **Programming Log** dialog box:

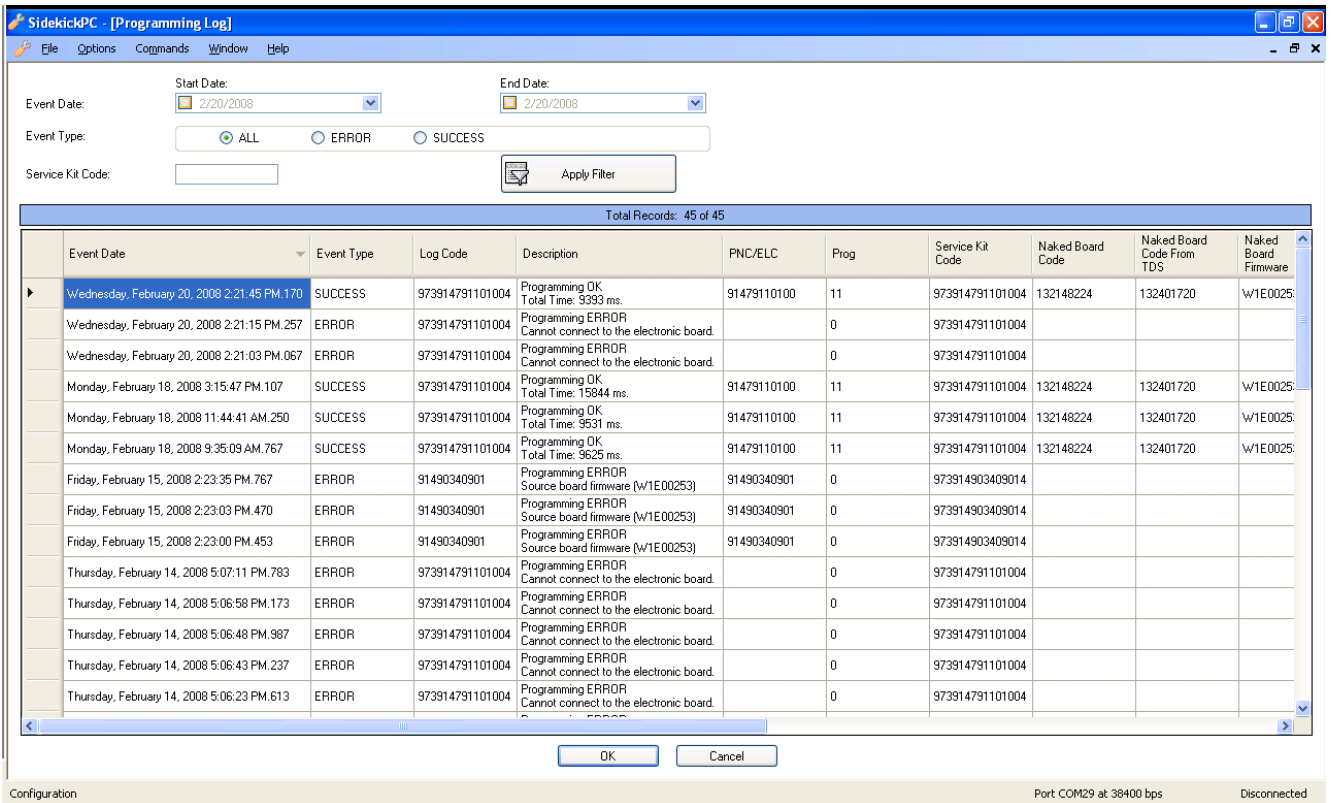


Fig. 36. Programming Log Dialog

The Programming Log dialog shows you information regarding board configuration activities. The program is able to keep a track of all boards that have been configured in the workstation.

Each record stores the information regarding a programming operation. The meaning of each field in the programming log record is the following:

- **Event Date:** date and time of the programming operation;
- **Event Type:** a string that identifies the result of programming (ERROR, SUCCESS);
- **Log Code:** a short string that stores the code as inserted by the operator;
- **Description:** additional information regarding the programming operation;
- **PNC/ELC:** the PNC/ELC in the database record selected for programming the board;
- **Prog:** the progressive insertion number that identifies the database record selected for programming the board;
- **Service Kit Code:** the service kit code related to the spare board to configure;
- **Naked Board Code:** the code of the naked board;
- **Naked Board Code From TDS:** the code of the naked board as specified in the TDS database;
- **Naked Board Firmware:** is the firmware identification string in the board before the configuration step;
- **MCF:** code and revision of the PNC parameters stored in the board. For Fabric Care appliances this field refers to the Machine Configuration File (MCF);

- **CCF**: code and revision of the base model parameters stored in the board. For Fabric Care appliances it refers to the Cycle Configuration File (CCF);
- **Configured Board Firmware**: firmware identification string in the board after the configuration step;
- **Configured Board SN**: serial number stored in the configured board, if any. The serial number provides the date and time of the programming operation. It is a decimal number with the following format:
YYMMDDHHmm
YY programming year modulus 40 (0..39 => 39=2039, 00=2040)
MM programming month (01..12 => 01=January, 12=December)
DD programming day (01..31)
HH programming hour (00..23)
mm programming minute (00..59)
Example: 708081155 => this serial number indicates that the board has been programmed on the 8th August 2007 at 11.55 AM.
- **Algorithm Name**: the algorithm used for programming the board;
- **Communication Speed**: the actual communication speed (baud rate) employed for board programming;
- **Always Replace Firmware**: when this flag is 'true', the program always overwrites the firmware even when the same firmware is already present in the target board;
- **Skip Verify After Programming**: when this flag is 'true', the program skips the check of the operation after the board programming step.

Electrolux uses the programming log information both for collecting data that is useful for improving the quality of products and for troubleshooting problems that you may experience while programming electronic boards.

The software uploads the programming log to the central Sidekick server each time you execute an Update operation. Programming log records are removed from your local PC after each update operation if they are older than a specified period called "programming log retention time". The programming log retention time is typically 30 days.

The **Verify Only** option allows you checking for the correct configuration of an already configured board. When this option is set, SidekickPC verifies for proper configuration rather than programming the board. This verification has 100% coverage of memory locations.

The **Spare Board Label** command in the Options menu shows the **Label** dialog box that allows the activation of label printing after each board programming operation:

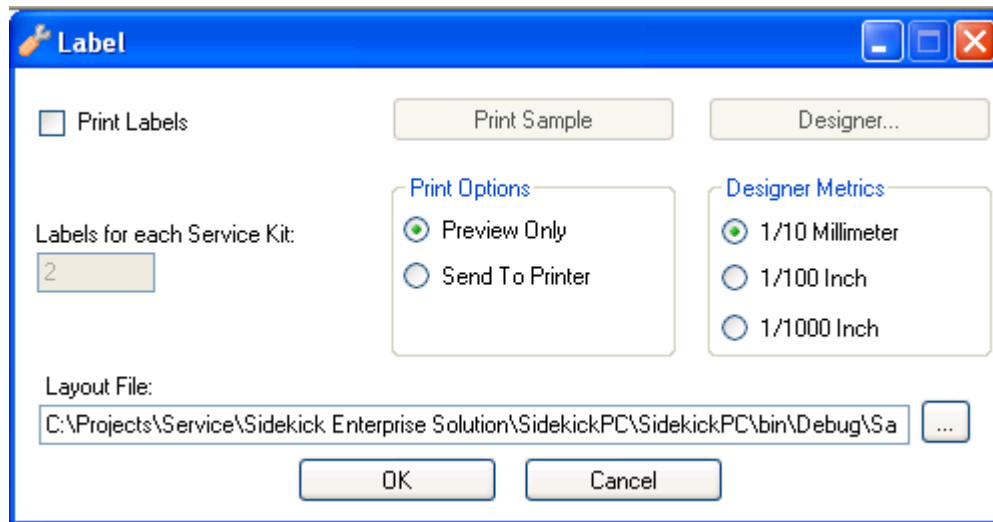


Fig. 37. Label Dialog

This dialog box allows you to enable/disable printing one or more labels after the successful programming of each board. You can select how many identical labels to print for each board (the number is limited to 10 labels).

With the **Layout File** field you define the label layout by means of external files (*.lbl).

According to the Print Options, the **Print Sample** command lets you preview or print a sample of the selected label.

Press the **Designer** button if you want to enter the integrated label layout Designer. The Label Designer enables you to modify an existing layout, to create a new one from the scratch, and to print sample labels. This is a graphical editor that provides you with the full control over the label appearance and contents. The **Designer Metrics** options allow you to specify the units of measure the editor displays. The description of the layout Designer is outside the scope of this manual.

The following is an example of label that you obtain:

973 914 791 101 00/4
00-01-132197270.000-132225610.000-W4A30111.000
SN = 708081155 created with SidekickPC 1.0

Fig. 38. Label Example

As you can see, the label shows all identification data regarding the spare part, appliance model, and database record used for the configuration:

973 914 791 101 00/4 is the Service Kit Code formatted for better readability;

00-01-132197270.000-132225610.000-W4A30111.000 indicates which database record has been used for programming the spare part or upgrading the appliance configuration. Each piece of information is separated from the following one by a hyphen. In the above example, from left to right, the meaning of the various fields is the following one:

00: ELC field in the selected record. Sometimes the ELC field may be different from the ELC that the Service Kit Code specifies;

01: Progressive Number field (Prog) in the selected record;

132197270.000: code and revision of the PNC parameters (machine configuration file for Fabric Care appliances) programmed in the configured board;

132225610.000: code and revision of the base model parameters (cycle configuration file for Fabric Care appliances) programmed in the configured board;

W4A30111.000: code and revision of the firmware programmed in the configured board;

SN = 708081155 created with SidekickPC 1.0 shows the serial number stored in the programmed board (if any). The meaning and format of the serial number has been previously described in this chapter, in the section that deals with the programming log.

3.3.2. Printing Extended Information in the label

It is possible to print extended information in the label(s) that the software is able to print after each board configuration.

Normally SidekickPC prints 3 lines of text.

By activating the **Print Extended Information** option in the Configuration Form, you can print additional information that you can enter before programming each board. In this case, if you use the proper label layout file (*.LBL), SidekickPC prints 4 lines of text.

This function is useful in all situations where the Service Kit Code is not used to identify the configured spare board. This is true for some geographical areas outside Europe. In this case you can manually specify the code to be printed on the label before programming each board.

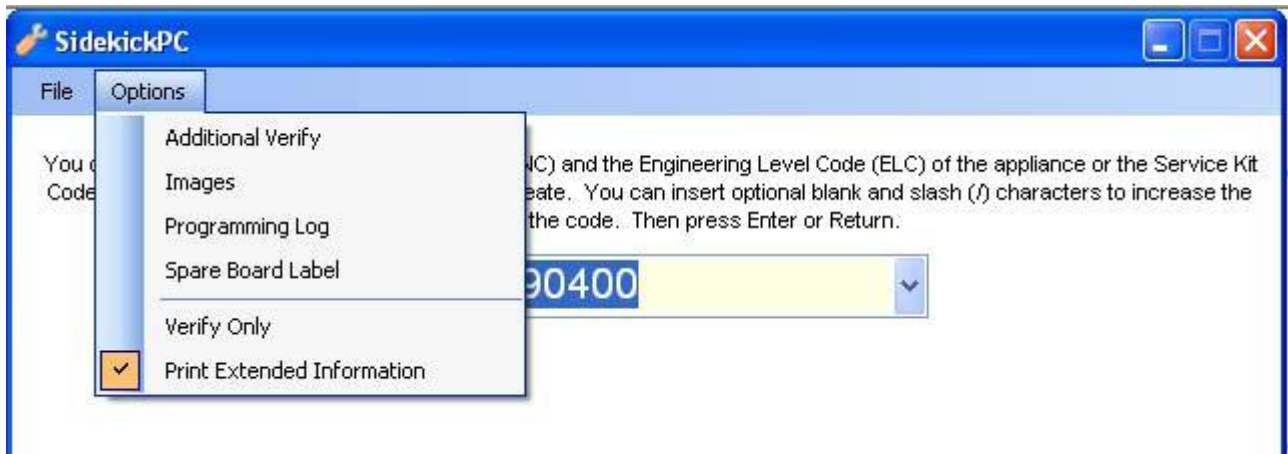


Fig. 39. Print Extended Information Option

If you quit SidekickPC and enter again, the software restores the state of the **Print Extended Information** option from the previous session (this option is persistent).

Please remember to choose a proper label layout file. In order to print all information, it is necessary that the selected label layout file refers to all 4 “Variables” that are available from within the Label Layout Designer. The figure below highlights these variables:

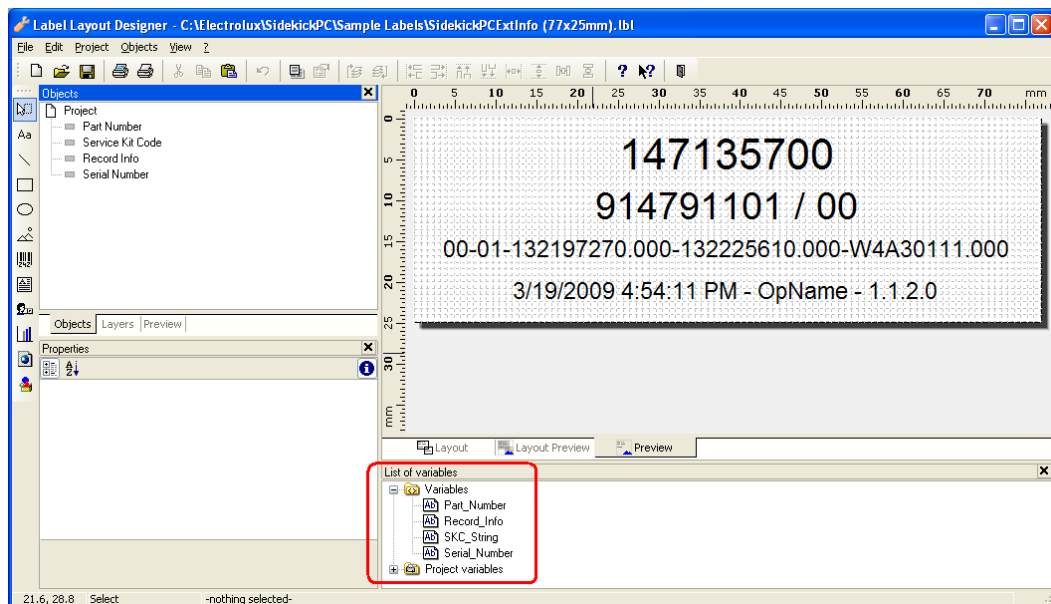


Fig. 40. Label Layout Designer Variables

The **Part Number** variable displays the part number as entered by the operator, as explained later in this section.

You can however start from one of the provided samples that support extended information:

1. SidekickPCExtInfo (77x20mm).lbl
2. SidekickPCExtInfo (77x25mm).lbl

Even if you start from one of the above samples, you must open the Layout Designer and adjust the label settings to your actual printer.

You can do that by means of the **Page Setup** command that you can find in the **Projects** menu. This command opens the **Layout** dialog box. This dialog box provides the **Printer Selection** tab:

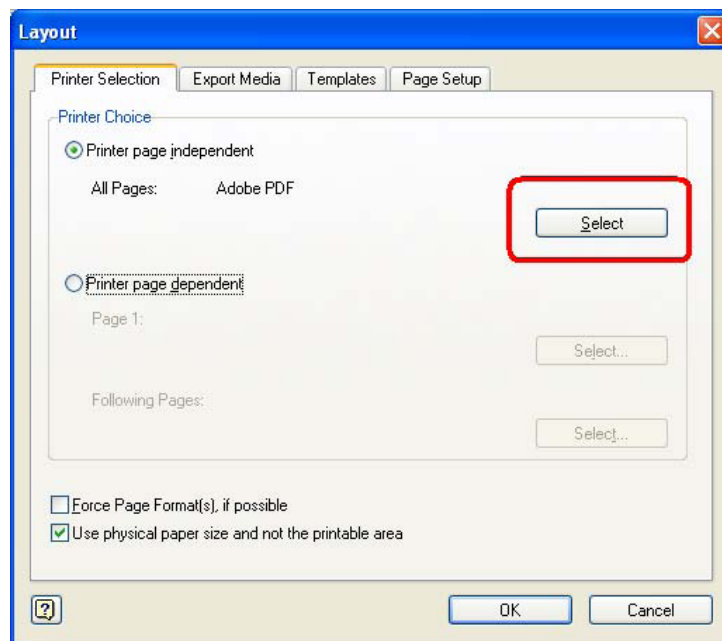


Fig. 41. Printer Selection

Please remember to adjust margins and sizes in the **Page Setup** tab:

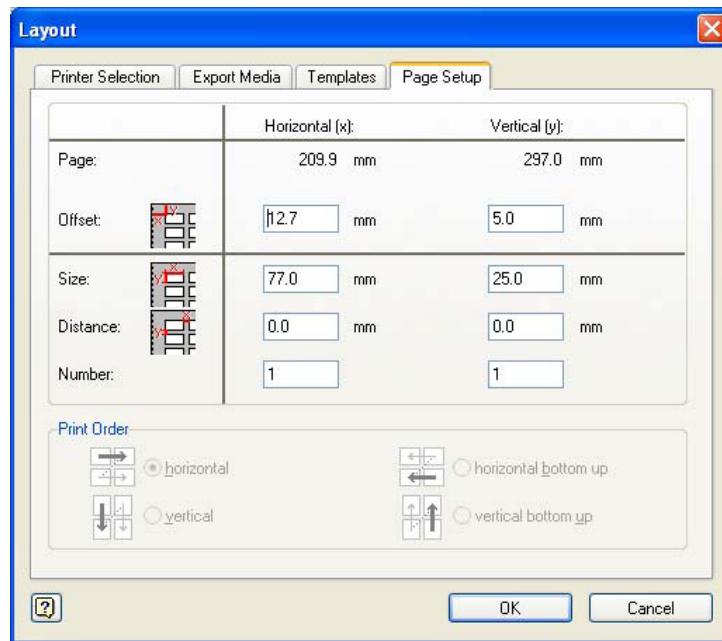


Fig. 42. Page Setup

When this option is enabled, the board programming operation consists in one step more. This step occurs just before the actual start of programming.

After you specify the quantity, you can enter also the name of the operator and the part number. This figure shows the new text entry controls:



Fig. 43. Extended Information Controls

Both **Operator's Name** and the **Spare Part Code** are options that are persistent between one session of SidekickPC and the next one.

The software stores the last 5 settings of these options. You can choose the most recent values from the corresponding list.

The function is devised in order to minimize data insertion efforts for the operator. After you specify the quantity, the focus moves automatically to the Spare Part Code, because it is more likely necessary to change it with respect to the Operator's Name.

The following is an example of an extended information label that you can obtain starting from one of the sample LBL files that SidekickPC supplies:

12345
914904904 / 00
00-10-192560050.000-132535209.021-WBE20306.000
3/19/2009 5:10:43 PM - JOHN - 1.1.2.0

Fig. 44. Extended Information Label Example

The meaning of the above information is the following:

12345 is the manually inserted code;

914904904/00 is the PNC/ELC;

00-10-192560050.000-132535209.021-WBE20306.000 has the same meaning as in the normal label described in the previous paragraph;

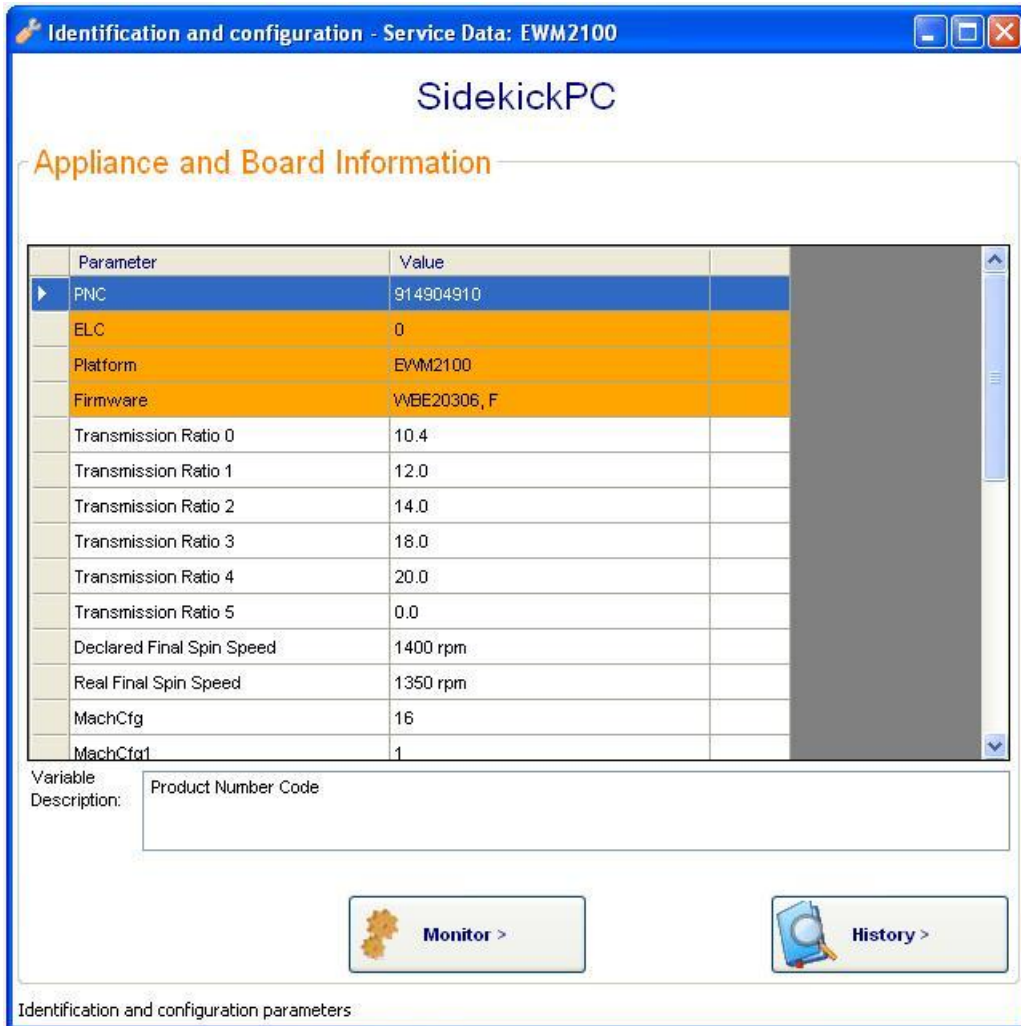
3/19/2009 5:10:43 PM indicates the date and time of the programming;

JOHN is the manually inserted operator's name;

1.1.2.0 is the version of SidekickPC.



3.4. Identification Form

This is the form that appears you when press the **Diagnostic** button in the Startup form just after the software successfully connects to the appliance and identifies it.



Parameter	Value
PNC	914904910
ELC	0
Platform	EWM2100
Firmware	WBE20306, F
Transmission Ratio 0	10.4
Transmission Ratio 1	12.0
Transmission Ratio 2	14.0
Transmission Ratio 3	18.0
Transmission Ratio 4	20.0
Transmission Ratio 5	0.0
Declared Final Spin Speed	1400 rpm
Real Final Spin Speed	1350 rpm
MachCfg	16
MachCfg1	1

Variable Description: Product Number Code

 **Monitor >**  **History >**

Identification and configuration parameters

Fig. 45. Identification Form

The title bar of this form shows the Service Data set that has been selected for the appliance under test. Service Data provide all information that is necessary for appliance diagnosis activities. Such information is associated to families of products (platforms), not to single appliance models. SidekickPC automatically associates the correct service data to use for diagnostic operations after it properly identifies the appliance.

This panel has three main groups of items.

The **Appliance and Board Information** group provides information about the current appliance (platform, PNC/ELC if known, firmware ID, board type), its main features and configuration. Items in orange background show appliance identification parameters. Items in white background show appliance configuration data.

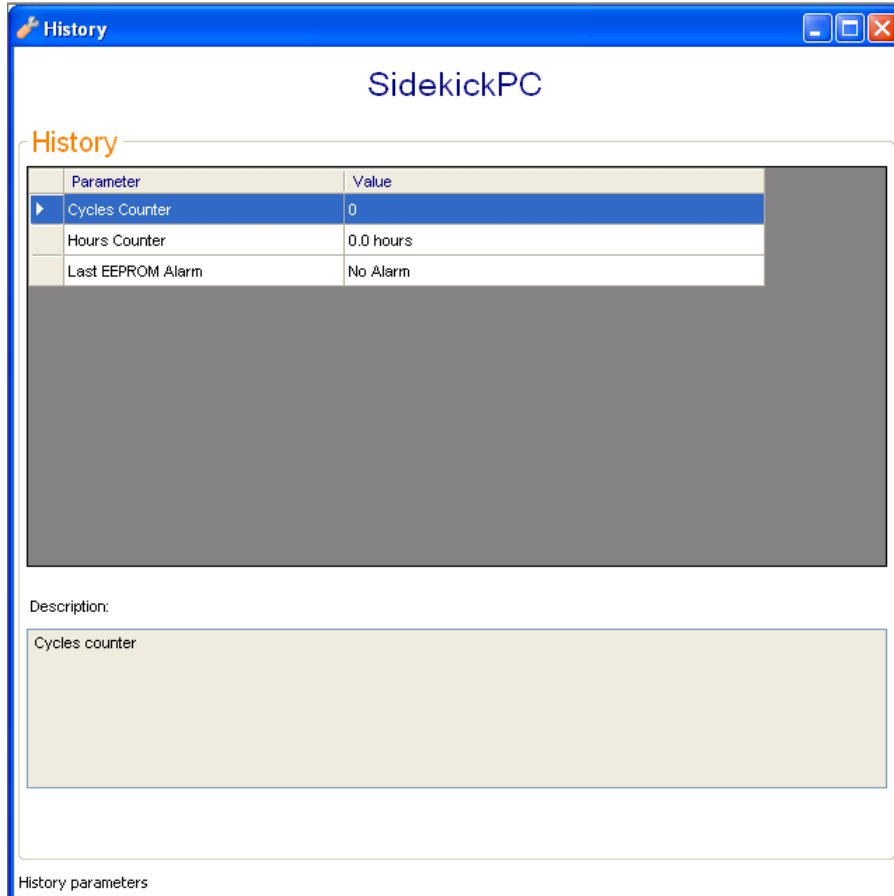
The **History** button opens the History Form. This button is not active if the database does not specify any history reference information for the connected appliance.

The **Monitor** button opens the Monitor Form.

If you want a detailed description about each parameter in the **Variable Description** box, just select the corresponding item in the above list.

3.5. History Form

The History form provides information about the device usage history stored in the non-volatile memory of the appliance.



Parameter	Value
Cycles Counter	0
Hours Counter	0.0 hours
Last EEPROM Alarm	No Alarm

Description:

Cycles counter

History parameters

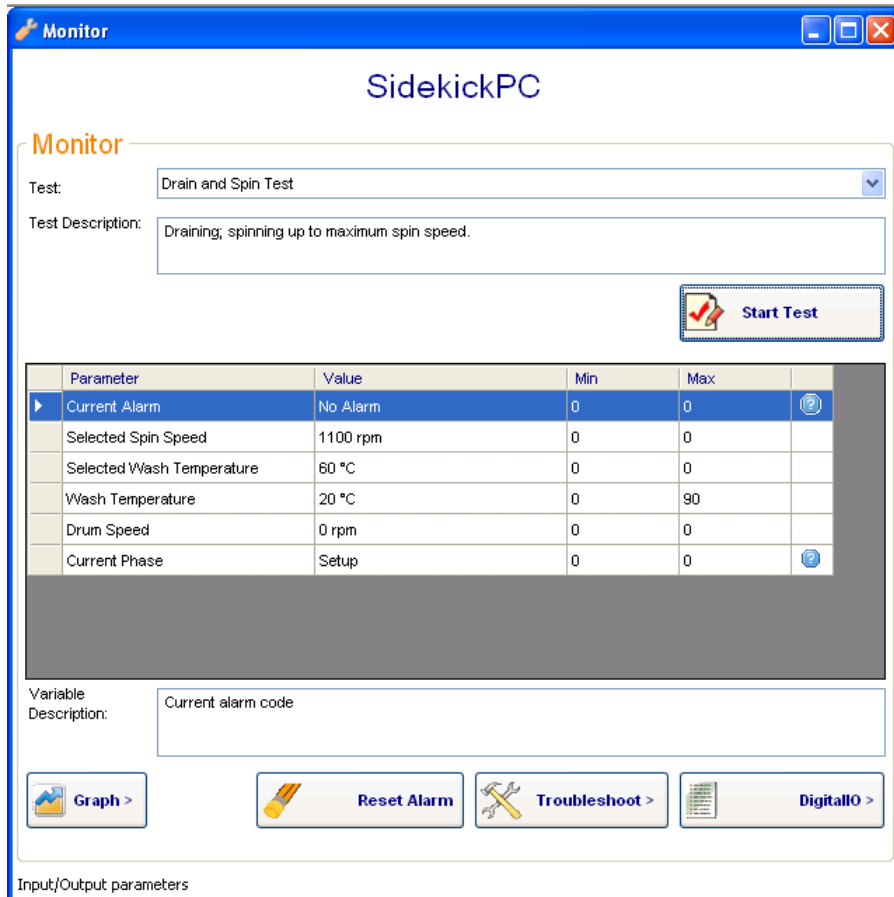
Fig. 46. History Form

At the top of History form you can see a list that shows the history information. To see the detailed description of each parameter in the **Description** textbox, just select the corresponding item in the above list.

The actual items listed in the list depend on the appliance model and local database contents.

3.6. Monitor Form

The Monitor form allows you watching appliance parameters and run the device tests.



Parameter	Value	Min	Max	
▶ Current Alarm	No Alarm	0	0	?
Selected Spin Speed	1100 rpm	0	0	
Selected Wash Temperature	60 °C	0	0	
Wash Temperature	20 °C	0	90	
Drum Speed	0 rpm	0	0	
Current Phase	Setup	0	0	?

Fig. 47. Monitor Form

At the top there is the **Test** selection list with all tests for the connected appliance. In order to start a test, just select an item from the list and press the **Start test** button. When a test is in progress, the same button becomes **Stop test**. In this case, you can use the button to stop the current test and, usually, reset the appliance.

Test Description provides a short description about the selected test (if any).

In the middle of the Monitor form there is a list of input/output parameters that provide meaningful information during the tests. In this list you can see the current values of the parameters. Please note that SidekickPC displays all items whose values are outside the minimum/maximum limits in red. The program usually updates these values every second. To see the detailed description of the variable in the **Variable Description** field, just select it by clicking the corresponding item.

The **Graph** button allows you to enter the Graph form that shows you some parameters in graphical form.

The **Reset Alarm** button resets the last alarm stored in the non-volatile memory of the electronic board. This command is only active if the local database defines a procedure to reset the last alarm. Please note that if one alarm is currently still active, you cannot clear the last stored alarm as it will be immediately set back again.

The **Troubleshoot** button shows the list of troubleshooting procedures defined by the local database for the appliance under test (if any). For more information on the troubleshooting feature of SidekickPC, please refer to the next paragraph.

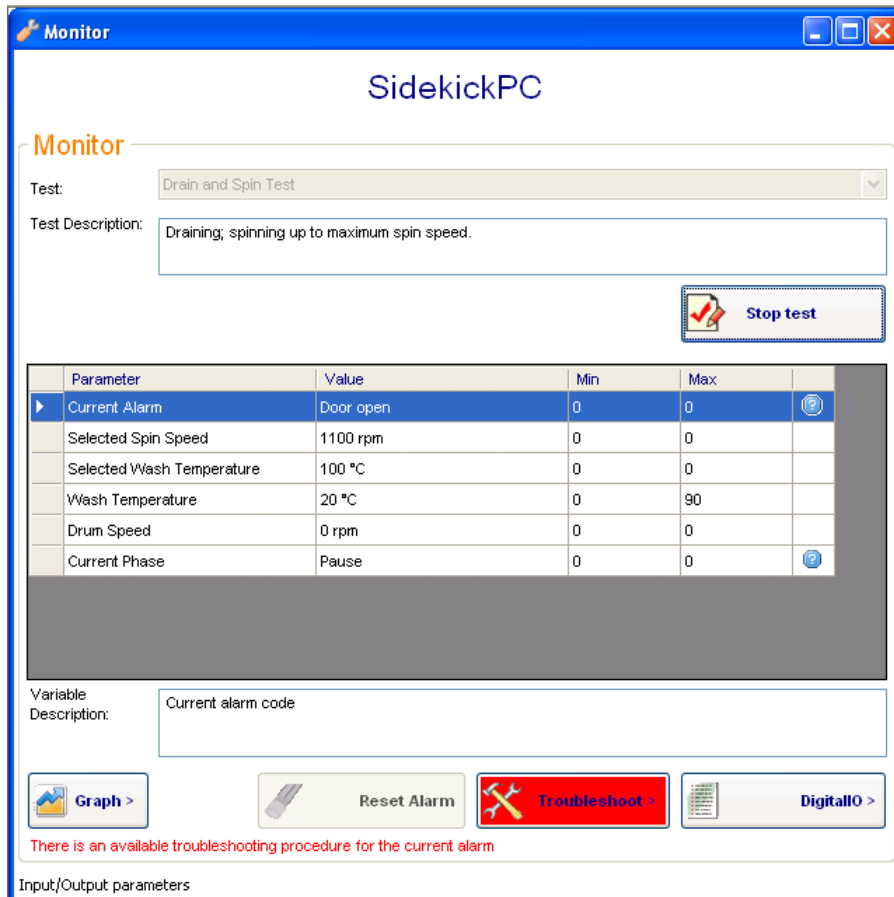
The **Digital I/O** button allows you to enter the Digital I/O form that displays the current state of the digital inputs and outputs in the appliance.

3.6.1. Troubleshooting Wizard

If the local database defines troubleshooting procedures for the appliance under test, the software is able to guide you step-by-step to the resolution of the fault, starting from the alarm code.

A troubleshooting procedure is a sequence of interactive dialog boxes.

When there is an alarm condition and the software detects that one troubleshooting procedure is associated to that alarm, the **Troubleshoot** button in the Monitor form becomes red:



The screenshot shows the SidekickPC Monitor window. The 'Test' dropdown is set to 'Drain and Spin Test'. The 'Test Description' field contains 'Draining, spinning up to maximum spin speed.' A 'Stop test' button is visible. Below this is a table with the following data:

Parameter	Value	Min	Max
Current Alarm	Door open	0	0
Selected Spin Speed	1100 rpm	0	0
Selected Wash Temperature	100 °C	0	0
Wash Temperature	20 °C	0	90
Drum Speed	0 rpm	0	0
Current Phase	Pause	0	0

Below the table, the 'Variable Description' field contains 'Current alarm code'. At the bottom, there are four buttons: 'Graph >', 'Reset Alarm', 'Troubleshoot >' (highlighted in red), and 'DigitalIO >'. A red message below the buttons states: 'There is an available troubleshooting procedure for the current alarm'.

Fig. 48. Available Troubleshooting Procedure

If you press the Troubleshoot button you can see the **Troubleshooting List** dialog:

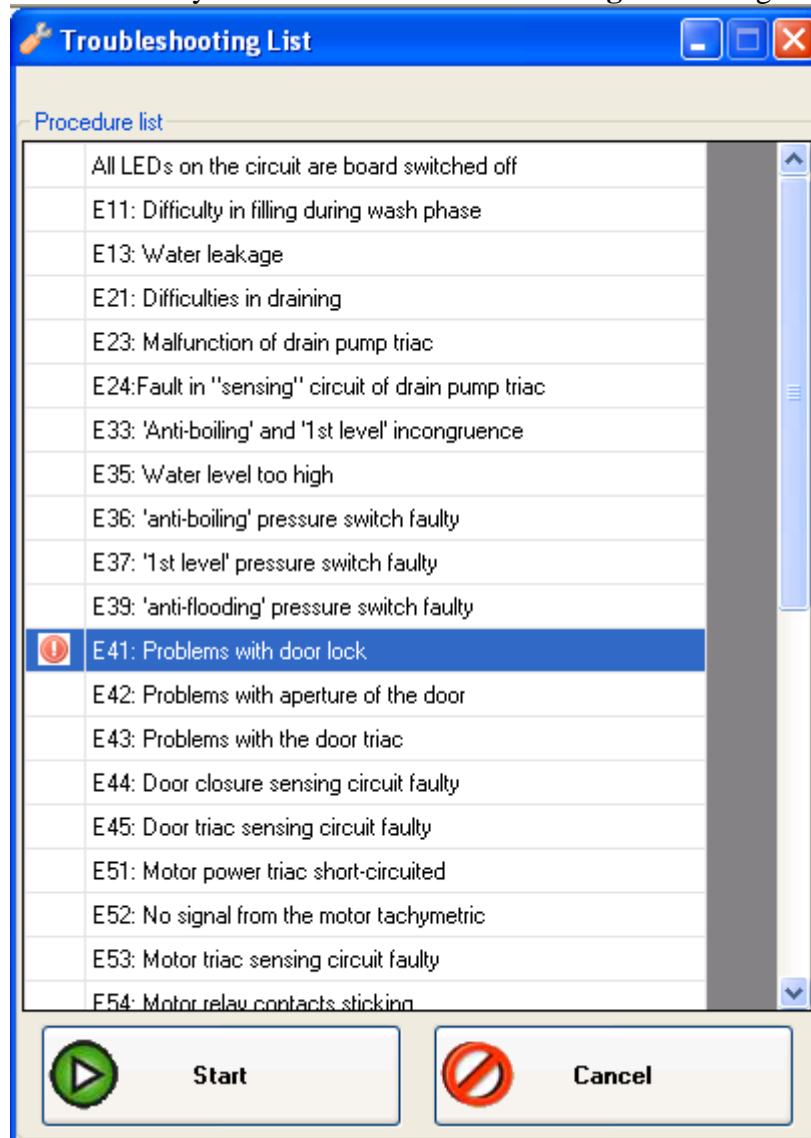


Fig. 49. Troubleshooting List

This dialog shows the list of all available troubleshooting procedures in the database. All procedures that are related to the current alarm condition (if any) are highlighted in red. In order to start the Troubleshooting Wizard for a certain procedure, just select it from the list and press the **Start** command.

Each step consists in a dialog box that shows instructions and up to two images:

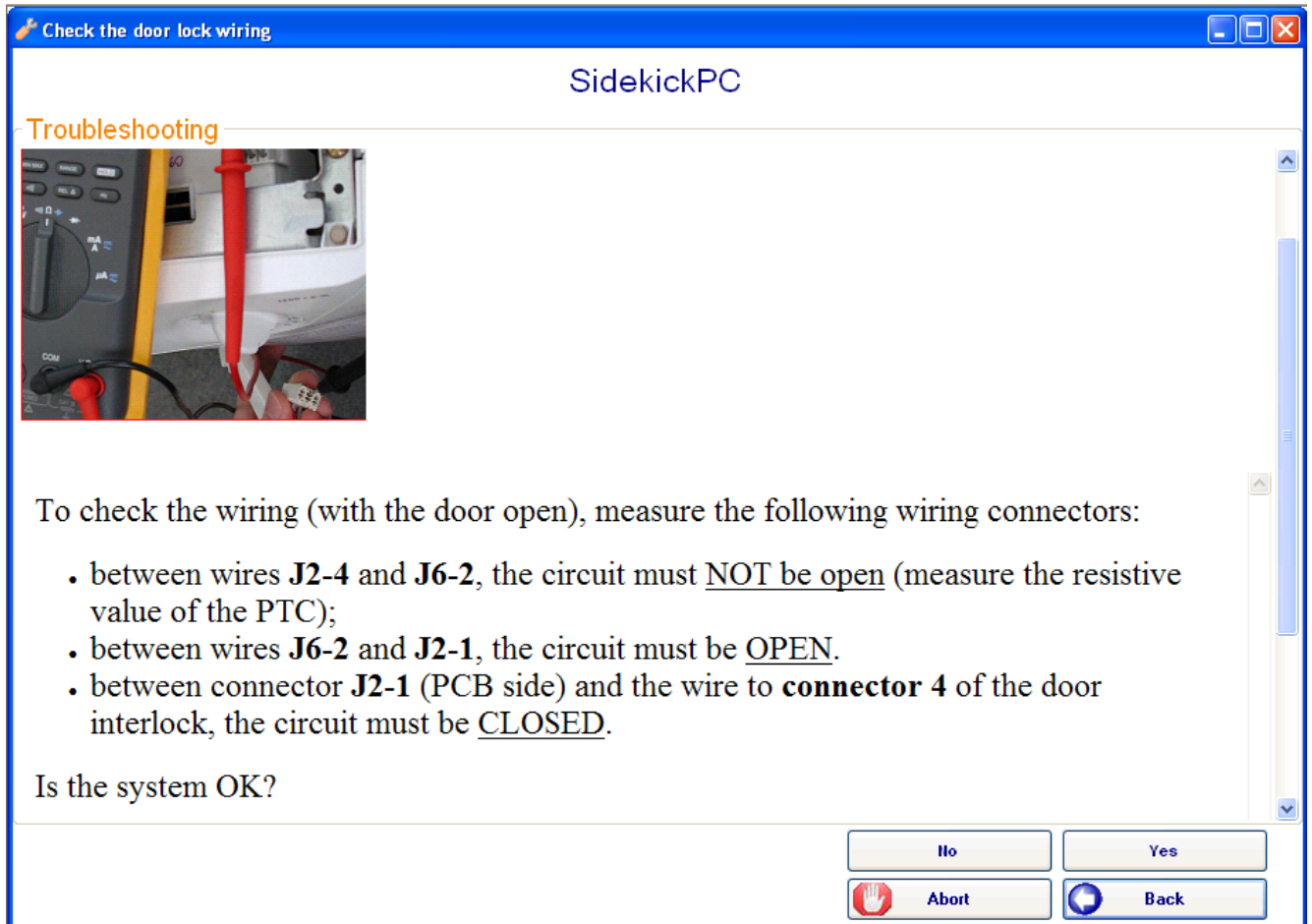


Fig. 50. Troubleshooting Wizard Step

The instructions provide information regarding the specific operation to execute. You should provide a result to the wizard in terms of a **Yes** or **No** answer. The next step, if any, depends on the answer you provide.

Troubleshooting steps either can be only manual or can involve the interaction with the electronic board. The management of such interaction is completely automatic for the end user.

3.7. Graph Form

The Graph form allows you to see the evolution of the appliance parameters in graphical form.

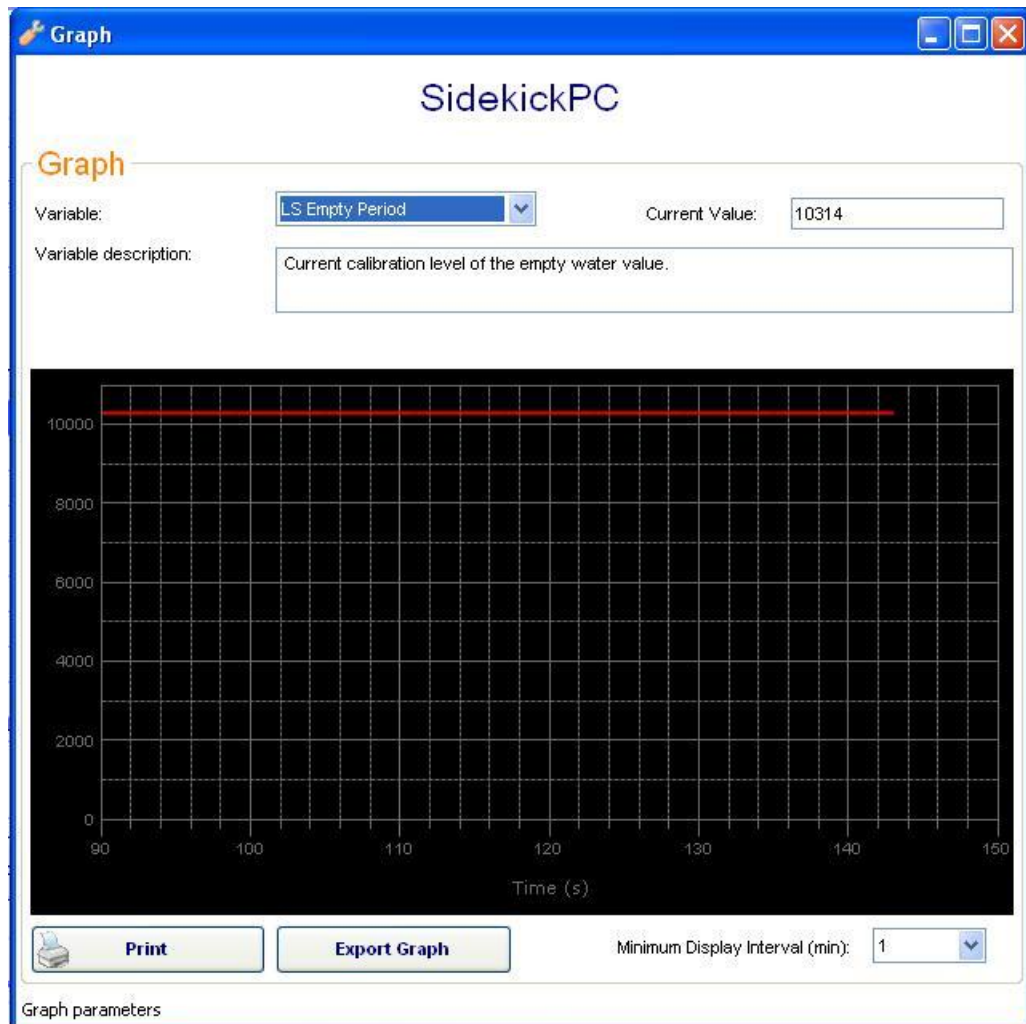



Fig. 51. Graph Form

To see the graphical representation of one appliance variable, you should choose it from the **Variable** selection field at the top of Graph Form. Click with the mouse the selection button () and choose the variable name. The detailed description of the variable appears in the **Variable description** field. In the **Current Value** field you can see the present value of the selected parameter.

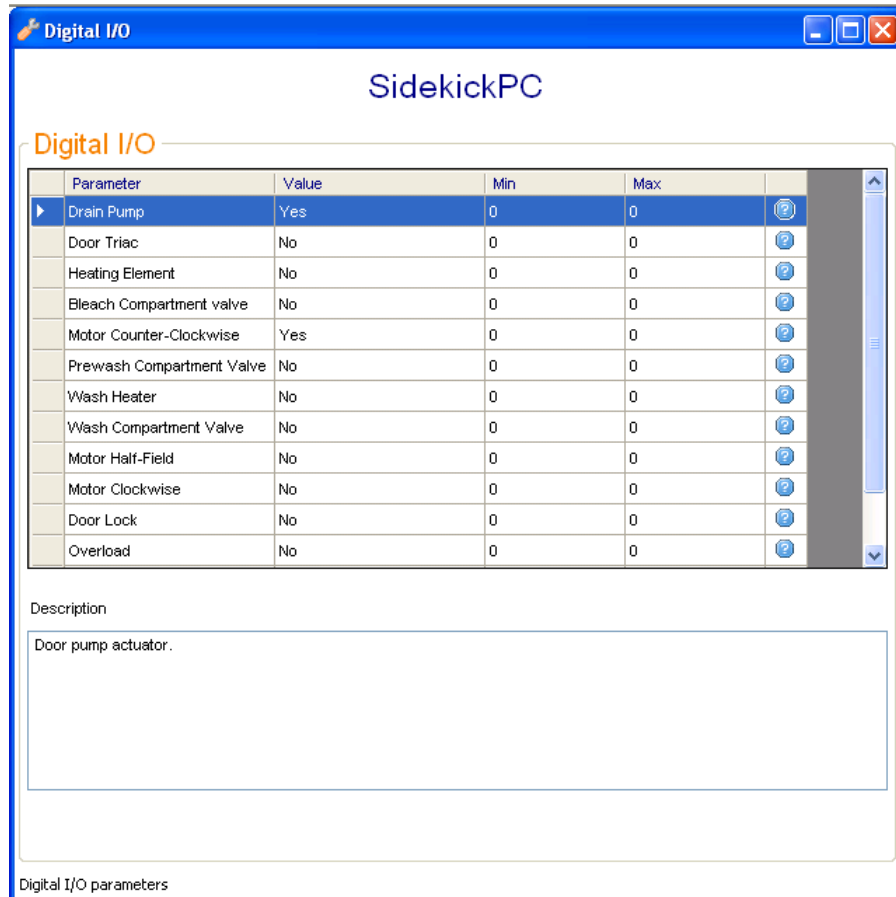
The **Maximum Display Interval (min)** control allows you to select the display width of the graph. The default interval is 1 min, but you can change it from 1 minute up to 5 hours. For each variable, the program reads a new data sample from the appliance every 1 second.

The **Print** button allows you to create a hardcopy of the current graph.

The **Export Graph** button allows you to export the current graph in one of the following image formats: BMP, GIF, JPG, PNG, and TIFF.

3.8. Digital I/O Form

The Digital I/O form displays the current state of the digital inputs and outputs in the appliance.



Parameter	Value	Min	Max	
Drain Pump	Yes	0	0	
Door Triac	No	0	0	
Heating Element	No	0	0	
Bleach Compartment valve	No	0	0	
Motor Counter-Clockwise	Yes	0	0	
Prewash Compartment Valve	No	0	0	
Wash Heater	No	0	0	
Wash Compartment Valve	No	0	0	
Motor Half-Field	No	0	0	
Motor Clockwise	No	0	0	
Door Lock	No	0	0	
Overload	No	0	0	

Description

Door pump actuator.

Digital I/O parameters


Fig. 52. Digital I/O Form

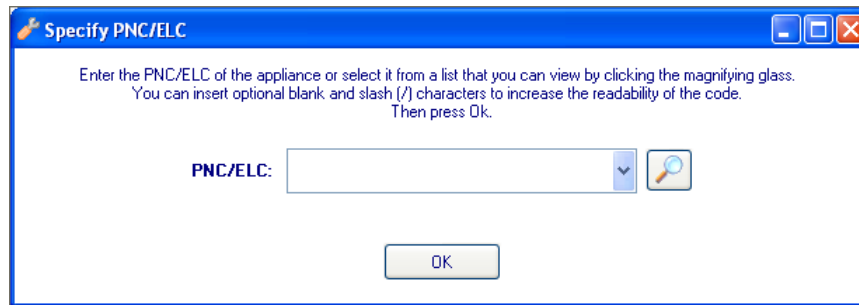
You can see a list of the digital inputs and outputs states that are meaningful during the diagnostic procedures. The program updates these values every second.

To see the detailed description of each parameter in the **Description**, just select the corresponding item in the list.

3.9. Appliance Information


If in the Start page you select the **Appliance Information** command, a dialog box asks you to insert the PNC/ELC of the appliance. You can insert optional blank and slash (/) characters in order to increase the readability of the string.

By pressing the  button, a list containing all the PNC/ELC Codes stored in the local database appears. You can select one item from the list and you have the possibility to restrict the selection list by filling the **Starts with** field.



Specify PNC/ELC

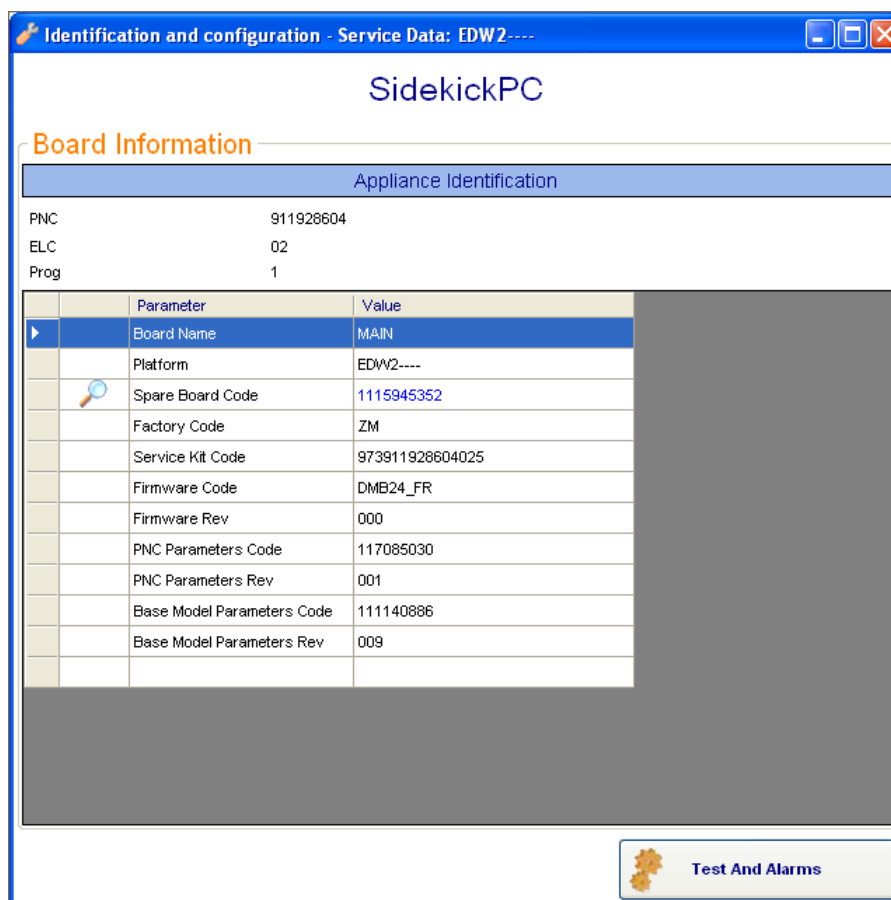
Enter the PNC/ELC of the appliance or select it from a list that you can view by clicking the magnifying glass. You can insert optional blank and slash (/) characters to increase the readability of the code. Then press OK.

PNC/ELC: 

OK

Fig. 53. Specify PNC/ELC Form

After you have inserted the code and pressed the OK button, the software shows you a form that provides some information about the appliance:



Identification and configuration - Service Data: EDW2----

SidekickPC

Board Information

Appliance Identification

PNC 911928604
ELC 02
Prog 1

Parameter	Value
Board Name	MAIN
Platform	EDW2----
Spare Board Code	1115945352
Factory Code	ZM
Service Kit Code	973911928604025
Firmware Code	DMB24_FR
Firmware Rev	000
PNC Parameters Code	117085030
PNC Parameters Rev	001
Base Model Parameters Code	111140886
Base Model Parameters Rev	009

Test And Alarms

Fig. 54. Identification and Configuration Form

This form provides the following information:

Board Name: name of the electronic board;

Platform: name of the electronic platform;

Spare Board Code: spare part number of the not configured board;

Factory Code: a code that identifies the factory;

Service Kit Code: spare part number of the configured board;

Firmware Code: a code that identifies the firmware;


Firmware Revision: firmware revision;

PNC Parameters Code: a code that identifies the configuration parameters;

PNC Parameter Revision: configuration parameters revision;

Base Model Parameters Code: a code that identifies the basic configuration parameters;

Base Model Parameters Revision: basic configuration parameters revision.

If you click the  button near the record related to the spare board, the **Spare Board Information** form appears (please refer to the corresponding paragraph in this manual for more information about this form).

If you click the **Test And Alarms** button the following form appears:

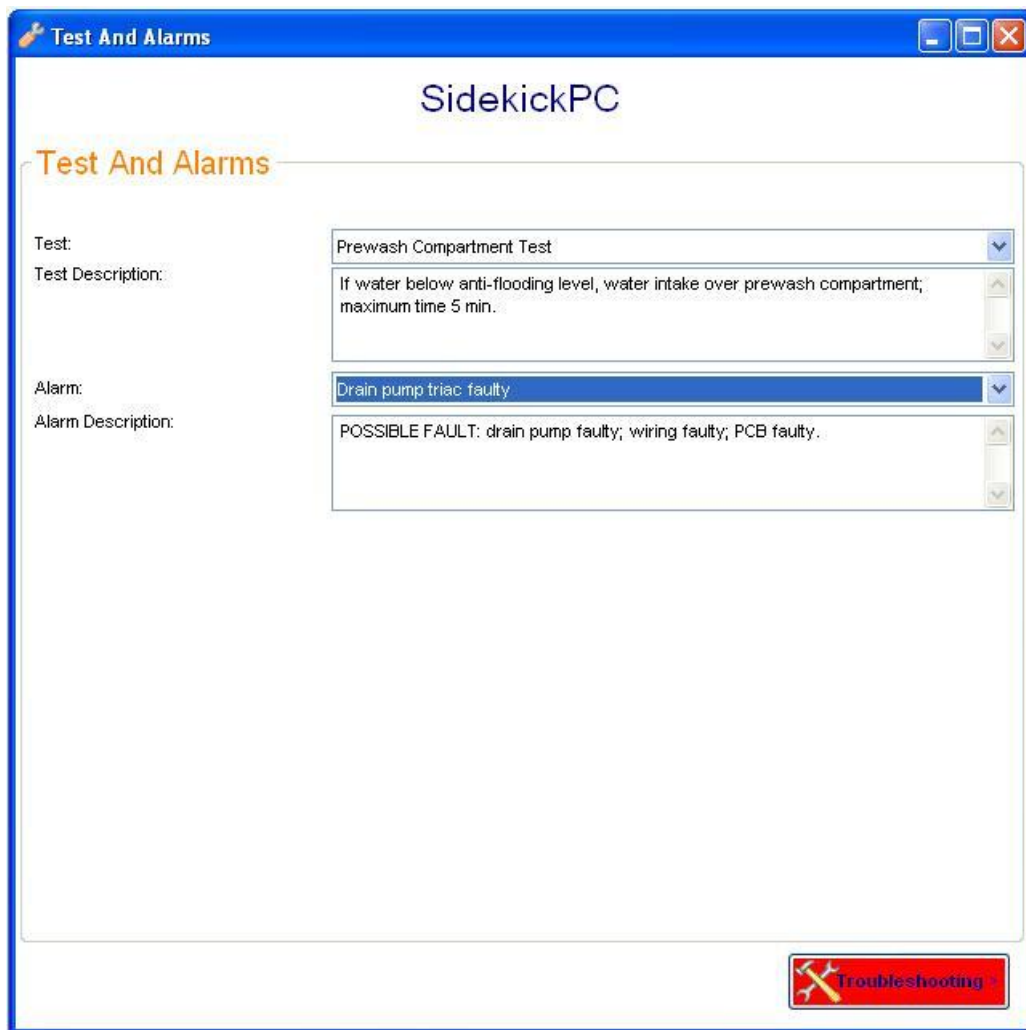


Fig. 55. Test And Alarm Form

This form shows a drop-down control named **Test** containing a test selection list, by selecting a test you can see the corresponding description into the **Test Description** textbox.

Below there is another drop-down control named **Alarm** containing a list of all alarm codes, by selecting one alarm code the corresponding description is shown in the **Alarm Description** textbox.

The **Troubleshooting** button allows you to select and execute troubleshooting procedures in off-line mode. The troubleshooting button is enabled only if there is at least one procedure available. If you press this button you can see the **Troubleshooting List** dialog:

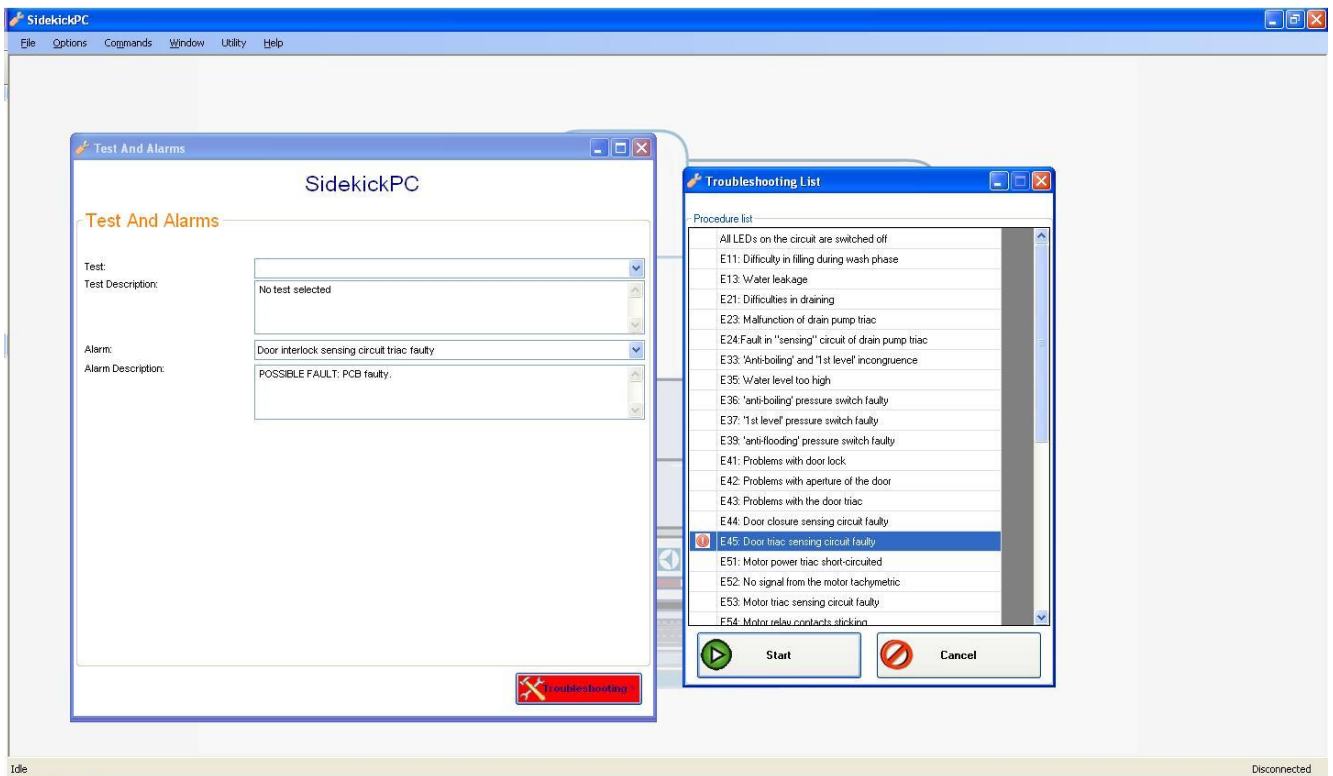


Fig. 56. Troubleshooting List

This dialog shows the list of all available troubleshooting procedures in the database.

By changing the Alarm in the alarm selection list, the corresponding procedure in Troubleshooting List is highlighted. In order to start the Troubleshooting Wizard for a certain procedure just select it from the list and press Start button.

The function is very similar to the troubleshooting procedure executed while you are diagnosing an appliance that is really connected. The only difference is that in this case SidekickPC does not send any commands to the appliance.

4. APPENDIX

This appendix describes the manual software installation. Sometimes you may need to execute a manual installation, for example in order to override default setup options or for investigating setup problems.

4.1. MANUAL SOFTWARE INSTALLATION

This paragraph describes the sequence of steps in a typical setup procedure on a PC running Windows XP without any additional installed software. Setup steps may however vary depending on the actual operating system and software configuration of the PC.

You must log on as full Administrator in order to make the installation of the software.

4.1.1. SidekickPC Setup

1. Run the **SETUP.EXE** program that is present in the root folder of the distribution CD.
2. If the .NET Framework 2.0 is not installed, SETUP asks you to install it. Just press **Accept** to go on:

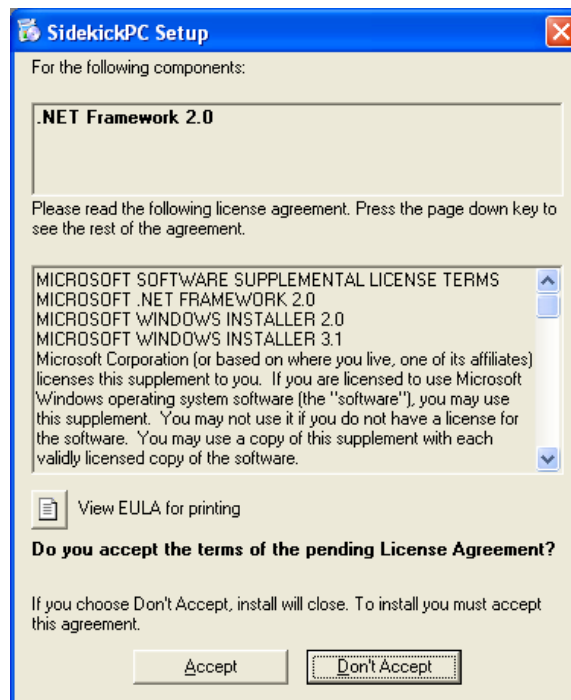


Fig. 57. Install .NET Framework 2.0

3. If the WSE 3.0 Runtime is not installed, SETUP asks you to install it. Just press **Accept** to go on:

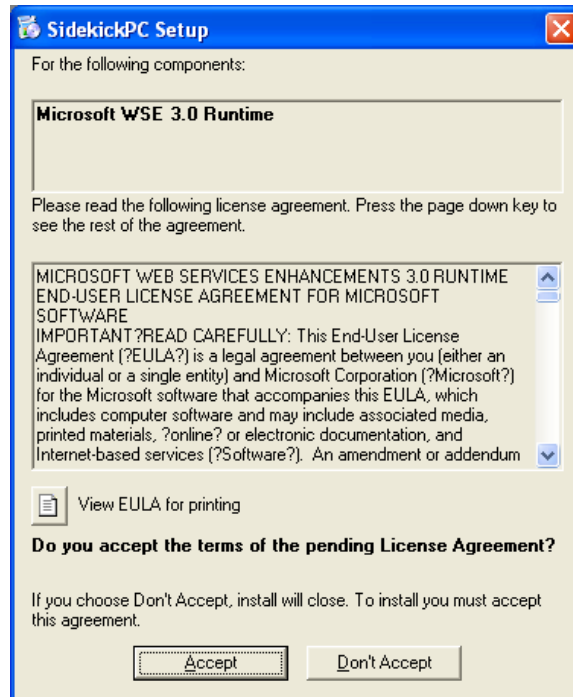


Fig. 58. Install WSE 3.0 Runtime

4. If Windows Installer 3.1 is not installed, SETUP asks you to install it. Just press **Accept** to go on:

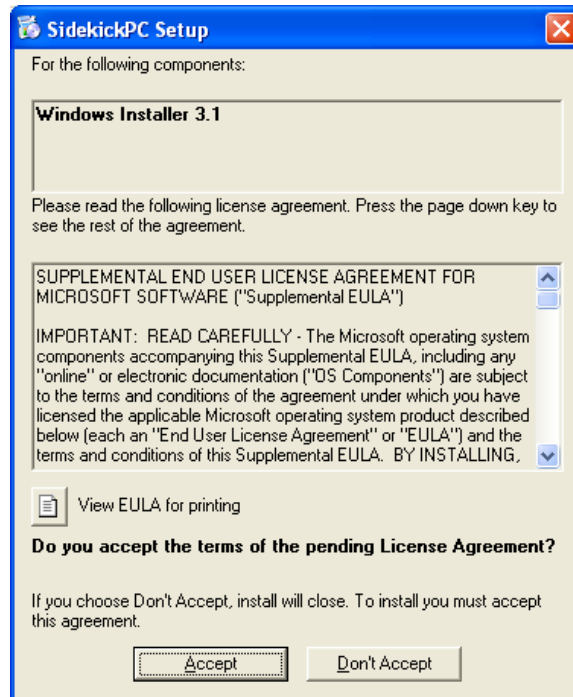


Fig. 59. Install Windows Installer 3.1

5. After installing Windows Installer 3.1 prerequisites, you are asked to reboot your PC.

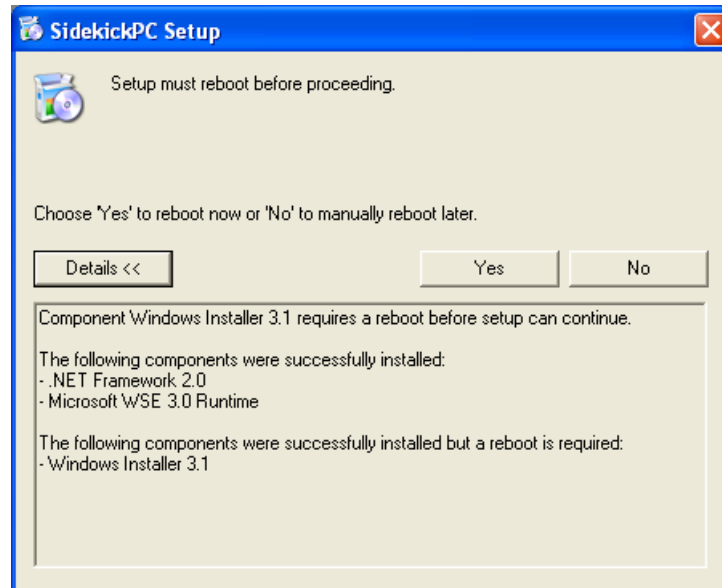


Fig. 60. Reboot the system

6. Reboot the PC, log on as full Administrator and, if necessary, run again SETUP.EXE. If there is no SQL Server 2005 installed instance, you immediately get an error message like the following one. Otherwise skip to step 17.

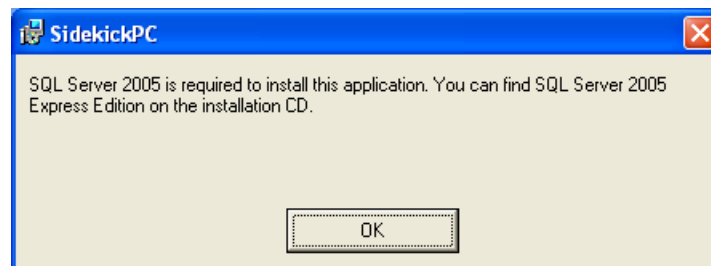


Fig. 61. SQL Server 2005 Required

Press **OK** to quit SETUP without completing the installation:

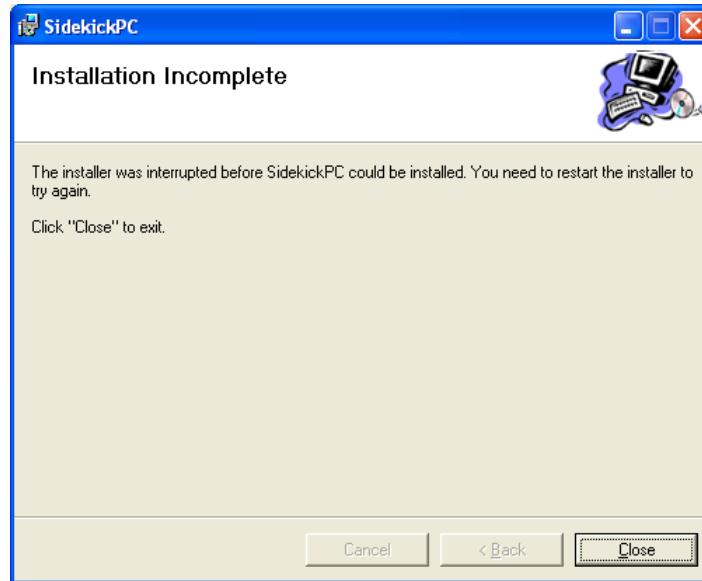


Fig. 62. Installation Incomplete

7. Run the **SQLEXPR.EXE** program located in the **SqlExpress** folder in the distribution CD and accept the license agreement. This program checks and installs prerequisites. At the end press **Next**:

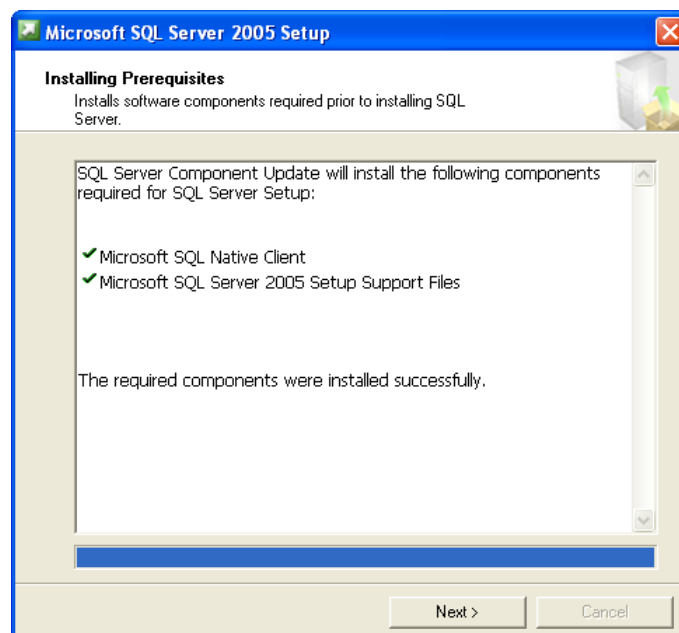


Fig. 63. SQL Server Express Setup – Prerequisites Installation

8. After the System Configuration Check press Next:

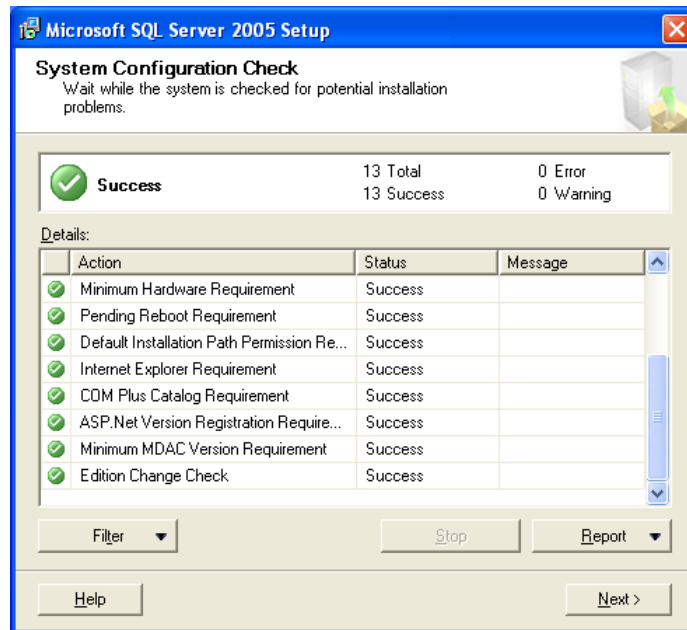


Fig. 64. SQL Server Express Setup – System Configuration Check

9. After entering registration data press Next:

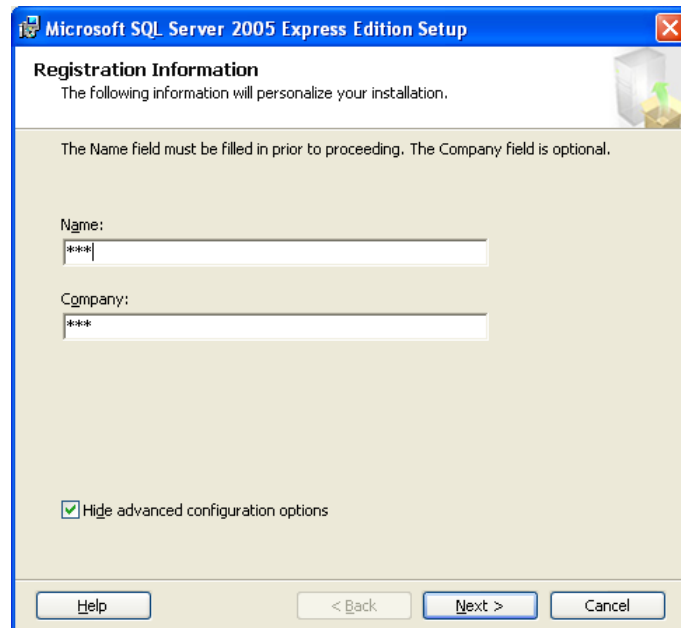


Fig. 65. SQL Server Express Setup – Registration

10. You can keep the default features. Then press Next:

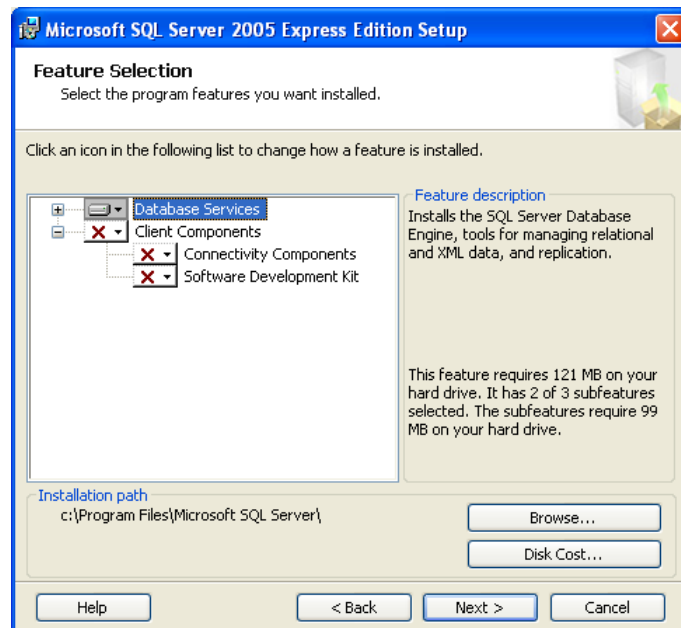


Fig. 66. SQL Server Express Setup – Feature Selection

11. You can keep the default for Authentication Mode (the setup program will later automatically change this setting to Mixed Mode):

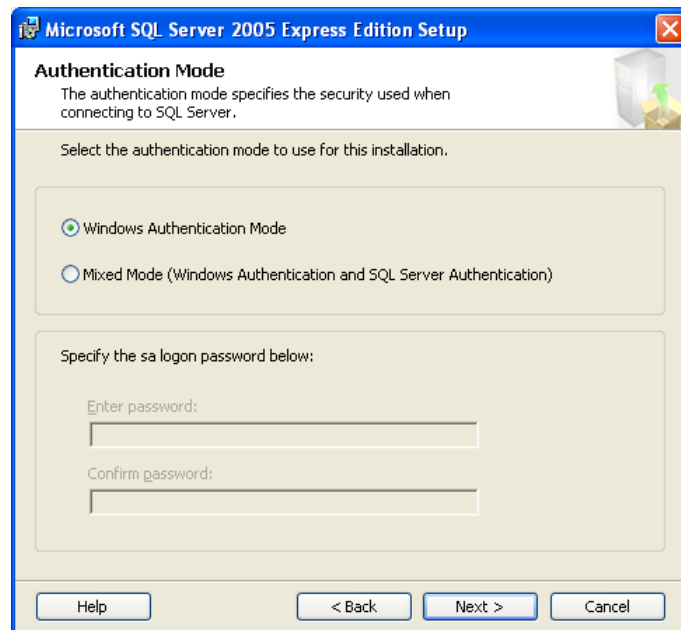


Fig. 67. SQL Server Express Setup – Authentication Mode

12. **Important:** select both checkboxes in the Configuration Options window and press Next.

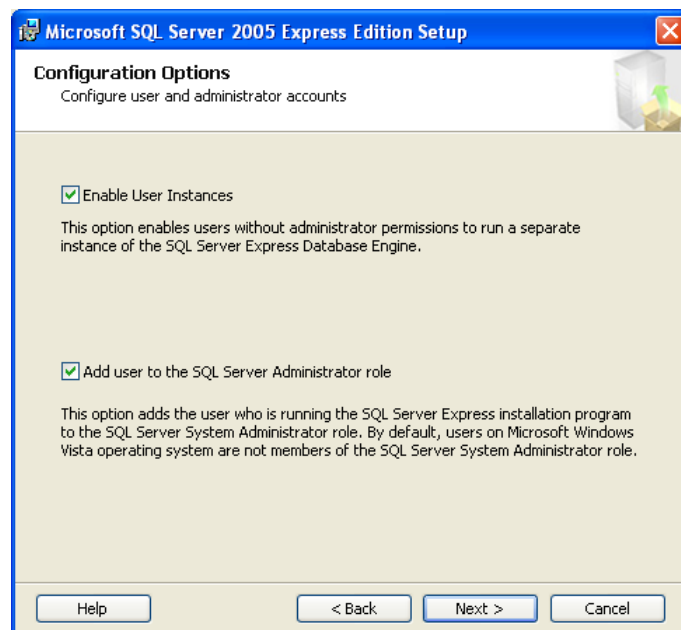


Fig. 68. SQL Server Express Setup – Configuration Options

13. Keep the default options for Report Settings, then press Next:

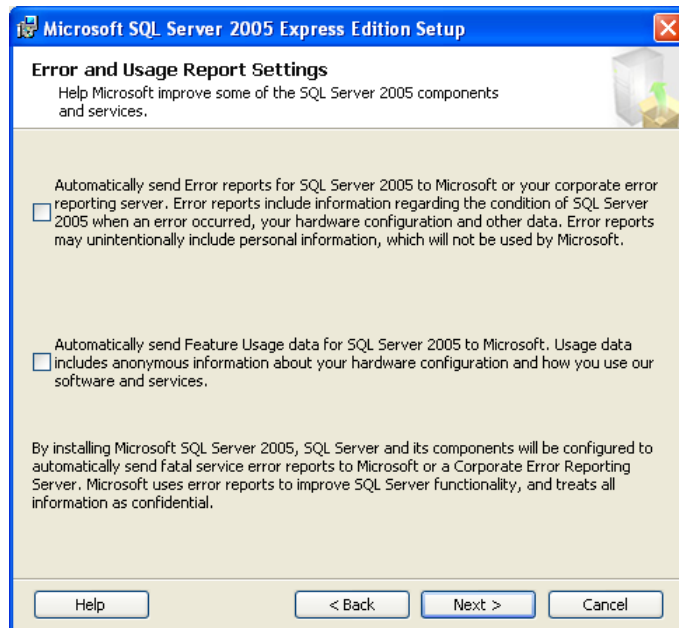


Fig. 69. SQL Server Express Setup – Report Settings

14. SQL Server 2005 is ready to install. Press Install:

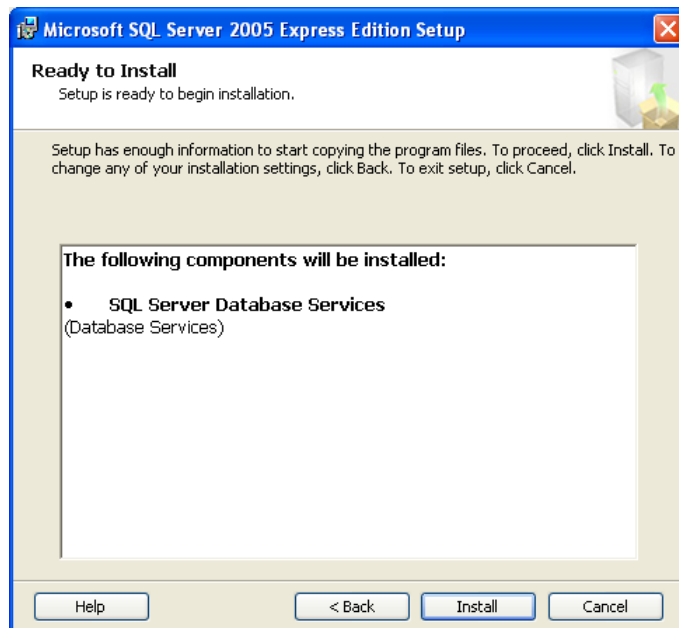


Fig. 70. SQL Server Express Setup – Ready to install

15. Wait until the end of SQL Server setup, then press Next:

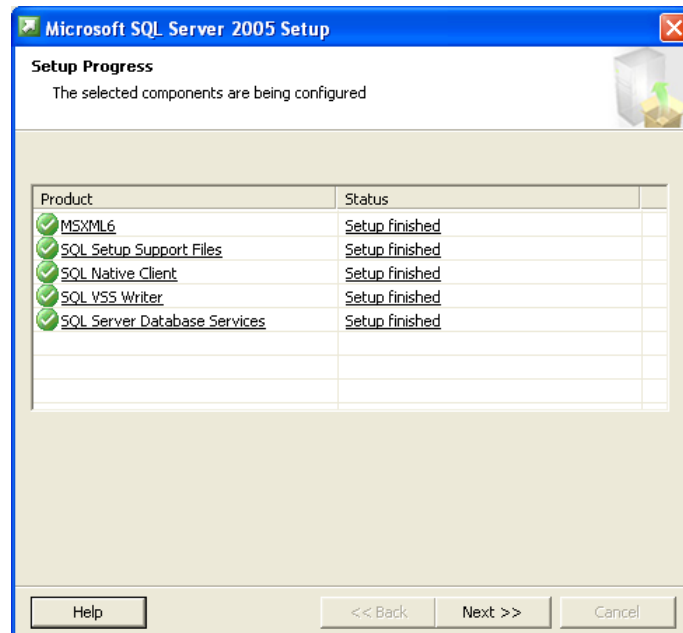


Fig. 71. SQL Server Express Setup – End of Setup

16. Just press Finish to complete the setup procedure:

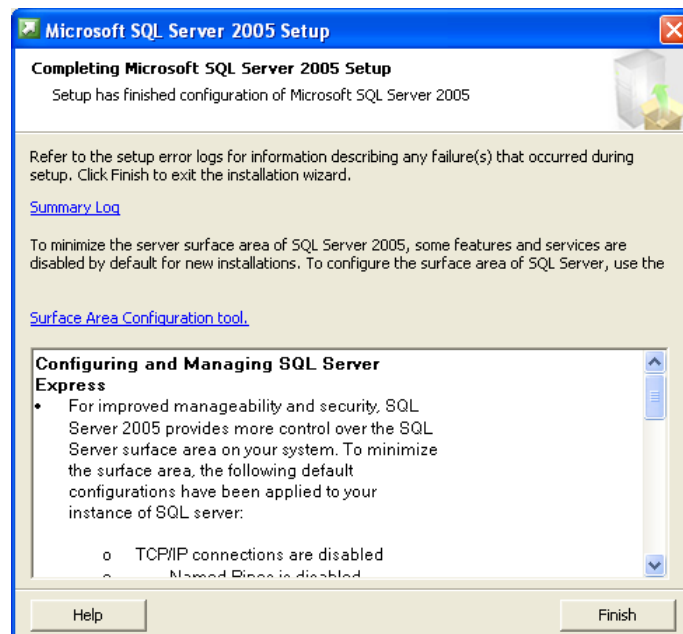


Fig. 72. SQL Server Express Setup – Optional Steps

17. If you have just installed SQL Server 2005 Express, run again SETUP.EXE. You are now prompted to choose the installation folder. Keep the default settings unless strictly necessary. Please remember that you cannot specify special folders like “**C:\Program Files**”, “**C:\Documents and Settings\All Users\Application Data**”, or “**C:\Windows\System32**”. If you do it, the setup will show you an error message and rollback the entire process. This limitation is due to a compatibility issue related to the Microsoft Vista operating system:

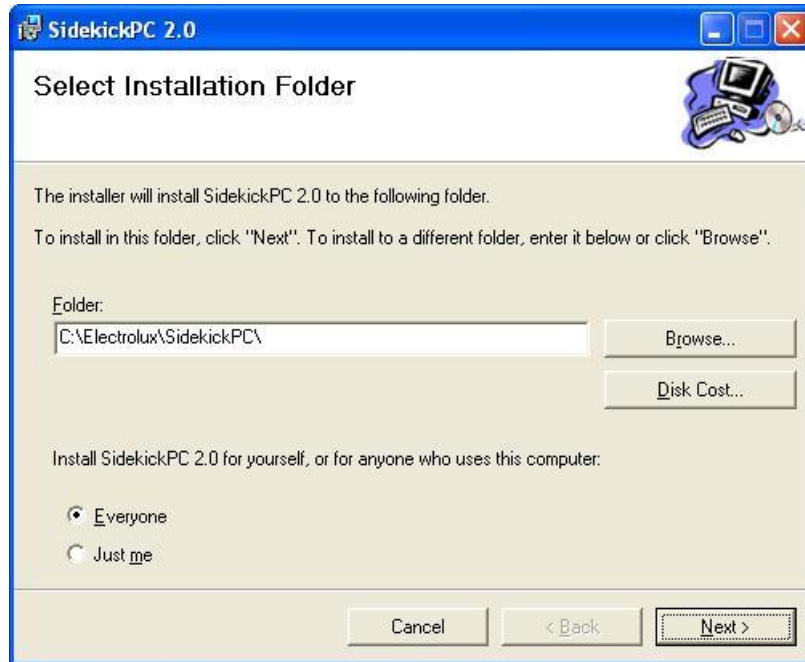


Fig. 73. Select Installation Folder

18. SETUP asks you to choose the settings of the Database that it is going to automatically create. It is possible to specify a database and login created with a previous installation of the software. Keep the default settings unless strictly necessary. **Data Source** identifies the SQL Server instance that will hold the local database. **Database** is the name of the local database. **User ID** and **Password** are the credential of the login to the local database. Please remember that, by default, SidekickPC uses “Mixed Authentication” to connect to the local database:

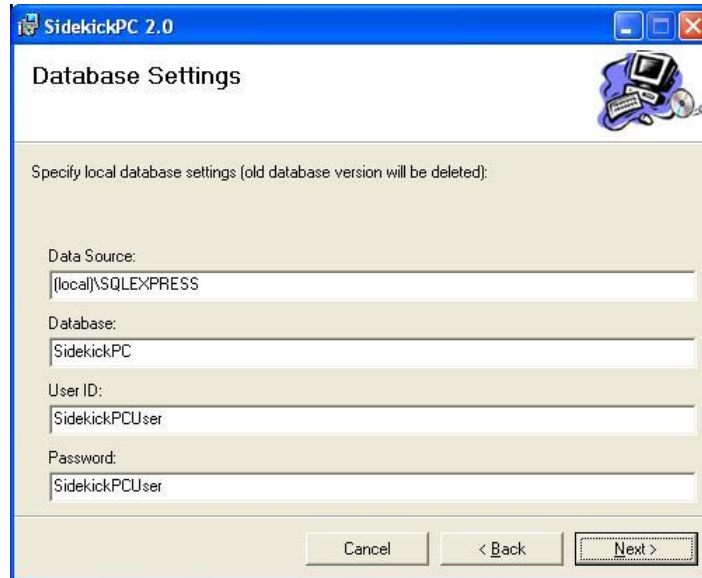


Fig. 74. Database Settings

19. Specify the URL and credentials for the Web Services Settings that the application will use to download data updates, if you already know them. For **Username** and **Password** you should use the login information you have been given with an automatic e-mail notification when your account was created. These are the same credentials that you use to access to the reserved area in the Sidekick Portal:

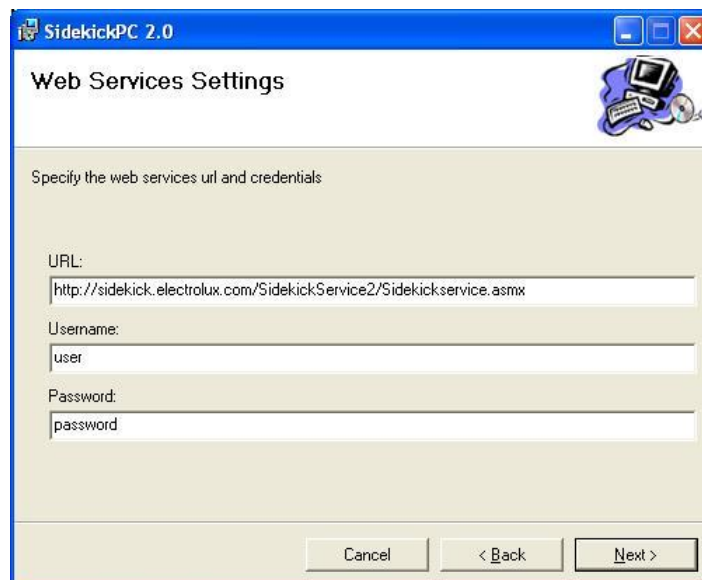


Fig. 75. Web Service Settings

20. Enter your license number in the Activation Settings window, if you already know it. You should use the license number you have been given with an automatic e-mail notification when your account was created:

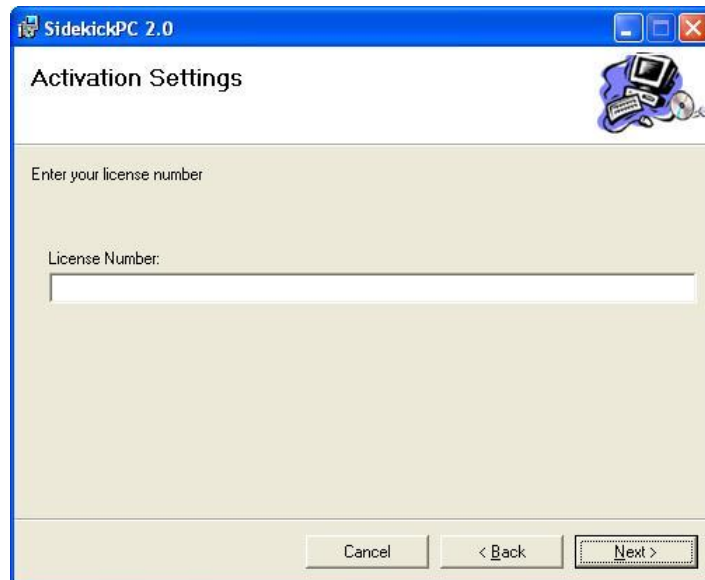


Fig. 76. Activation Settings

21. Confirm the installation and wait for the completion of the process. If any errors occur during the setup, an installation log appears. Otherwise no other dialog appears, except the final one.
22. SETUP finally completes. Just press Close to end the process:

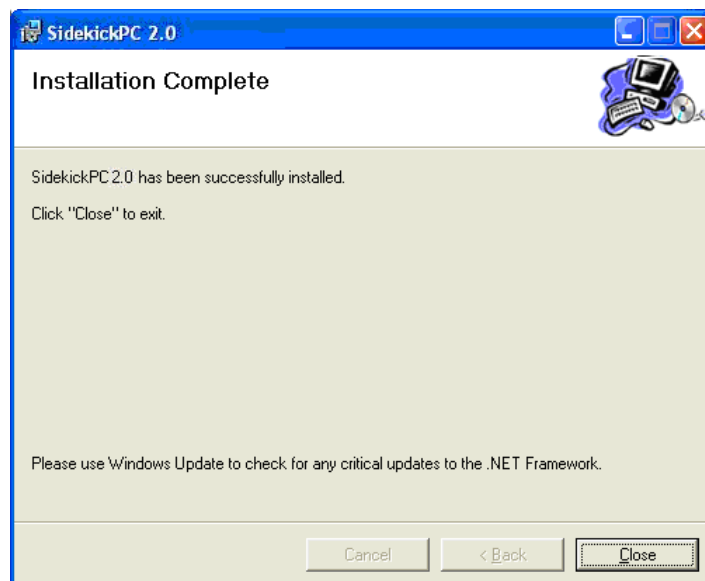


Fig. 77. Installation Complete

4.1.2. SQL Server Management Studio Express Setup

This section describes the optional installation of SQL Server Management Studio Express. The installation of this software is only necessary for software troubleshooting purposes. This is a tool for the administration of the local database, only necessary for software support activities. In most cases you can simply skip this section.

1. Run the **SQLServer2005_SSMEE.msi** installer located in the **Extra\Microsoft SQL Server Management Studio Express** folder in the distribution CD. In the welcome dialog press Next:

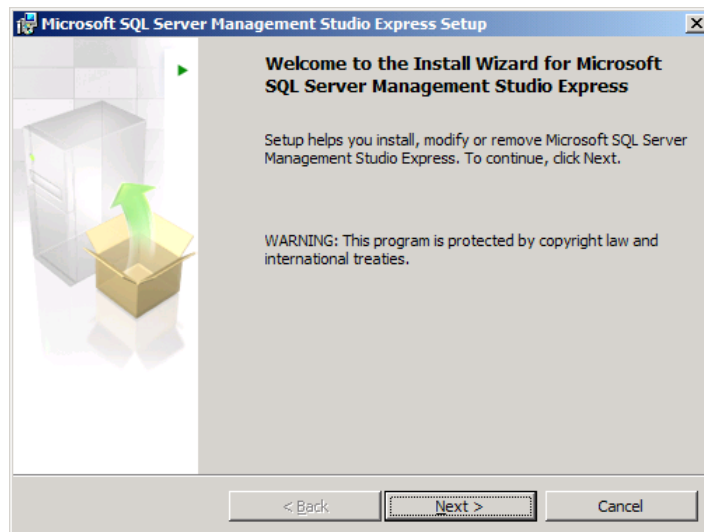


Fig. 78. SQL Server MS Express Setup - Welcome

2. Accept the license agreement, then press Next:

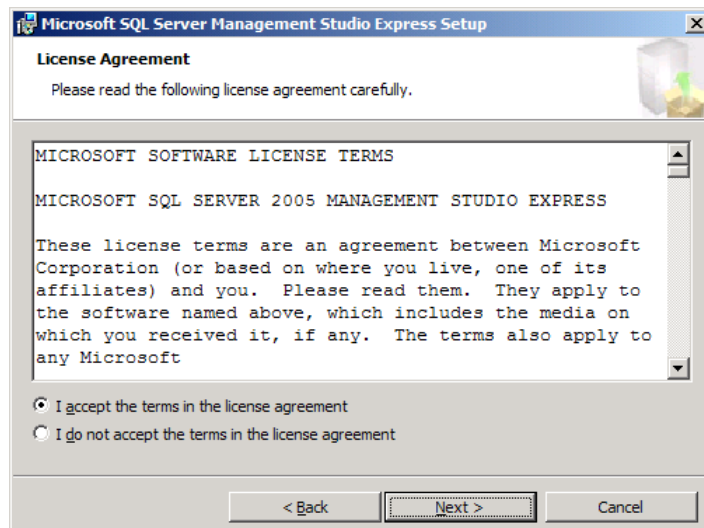


Fig. 79. SQL Server MS Express Setup – License Agreement

3. Insert registration information, then press Next:

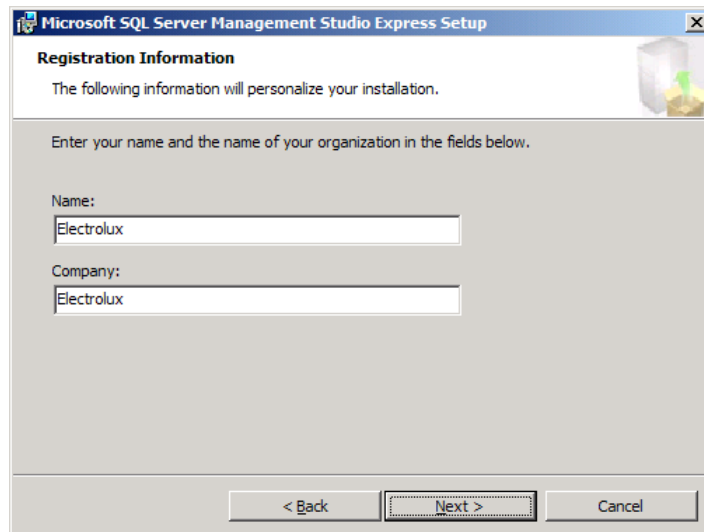


Fig. 80. SQL Server MS Express Setup – Registration

4. You can select the default features. Then press Next:

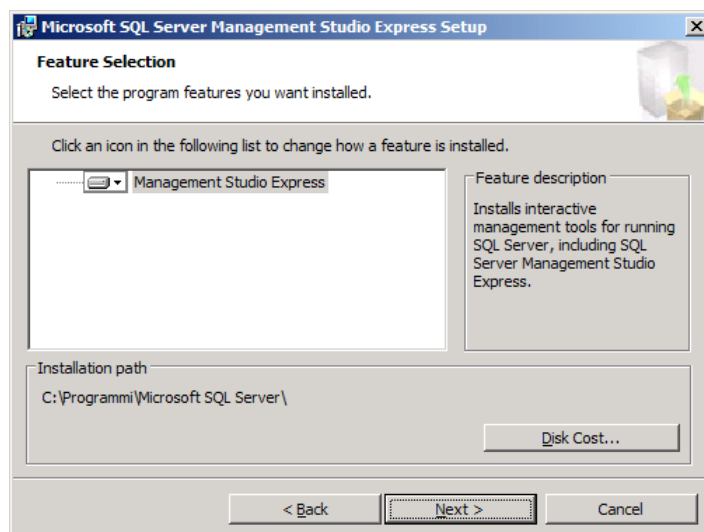


Fig. 81. SQL Server MS Express Setup – Feature Selection

5. SQL Server Management Studio Express is ready to install. Press Install:

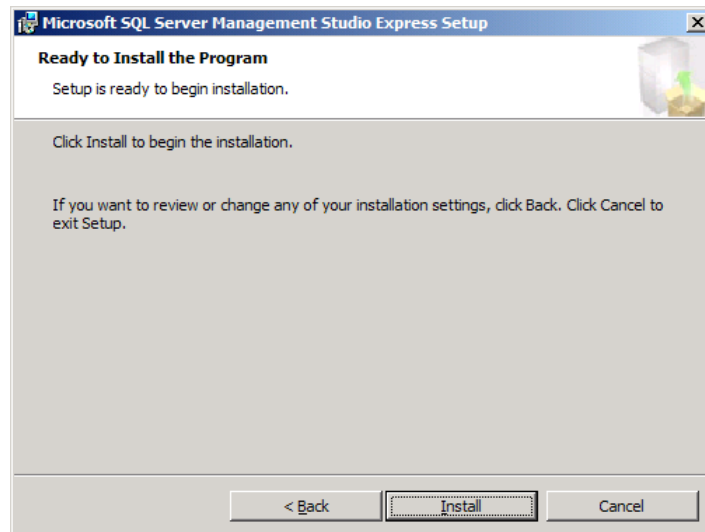


Fig. 82. SQL Server MS Express Setup – Ready to Install

6. Wait until the end of setup, then press Finish:

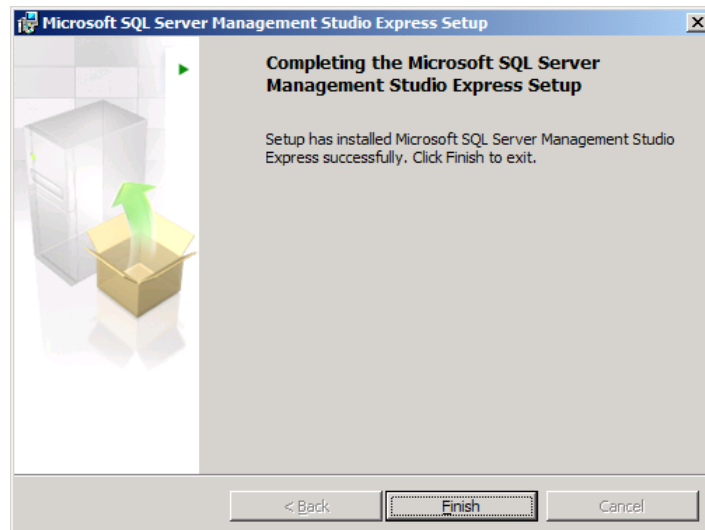


Fig. 83. SQL Server MS Express Setup – End

4.2. TROUBLESHOOTING SETUP PROBLEMS

In this section you can find additional information that you may need in order to solve installation problems.

4.2.1. Manual installation of prerequisites

Under certain circumstances, the Sidekick setup procedures may not be able to detect the absence of one or more software prerequisites. In this case you can install them manually prior running the manual or automatic setup.

In case of need, you should manually install the prerequisites in the following order:

1. **Microsoft Windows Installer 3.1.** Run the \WindowsInstaller3_1\WindowsInstaller-KB893803-v2-x86.exe file.
2. **MDAC 2.8.** Run the \MDAC28\mdac_typ.exe file.
3. **Microsoft .NET Framework 2.0.** Under Windows XP or Vista 64-bit run the \dotnetfx\64-bit\NetFx64.exe file. Under Windows XP or Vista 32-bit run the \dotnetfx\32-bit\dotnetfx.exe file.
4. **Microsoft WSE 3.0.** Run the \WSE3_0\Microsoft WSE 3.0 Runtime.msi file
5. **Microsoft SQL Server Express Edition 2005 SP2.** Run the \SqlExpress\SQLEXPRESS.EXE file. At this point the SQL Server setup program may detect that Microsoft Internet Explorer 6.0 SP1 is missing. In this case you must stop the installation and run \Extra\IE6Setup\ie6setup.exe, prior installing SQL Server.
6. **SQL Server Management Studio Express** (optional). Run \Extra\Microsoft SQL Server Management Studio Express\SQLServer2005_SSMSEE.msi.

4.2.2. SQL Server installation problems

Under certain circumstances, the SQLEXPRESS.EXE program may encounter problems depending on the actual configuration of the PC and of the network. These problems are outside the control of Electrolux.

In case of problems you can find in the internet plenty of information regarding tips and workarounds related to setup issues. You should in particular refer to Microsoft forums dealing with the matter. Experience collected so far by CTI has revealed a few problems regarding the setup of SQL Server 2005 Express Edition. You can find the solution for these problems here:

<http://sidekick.electrolux.com/SidekickPortal/UsersReservedArea/DownloadDetails.aspx?ContentID=ApplicationNote3>